

SCHOLASTIC COACH

Basketball Offense by

Adolph Rupp
Clair Bee
Howard Hobson

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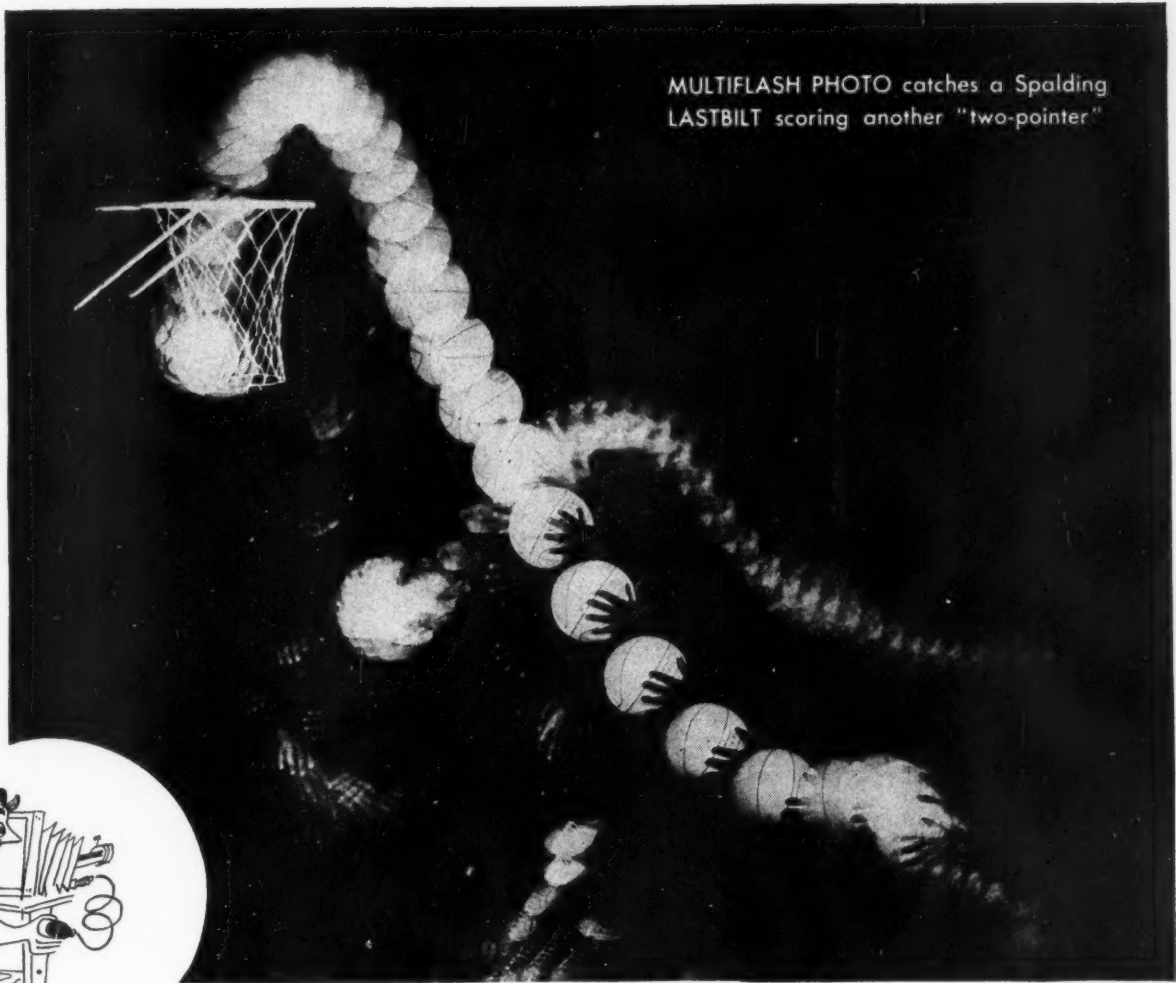
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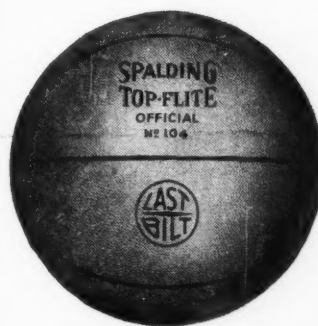
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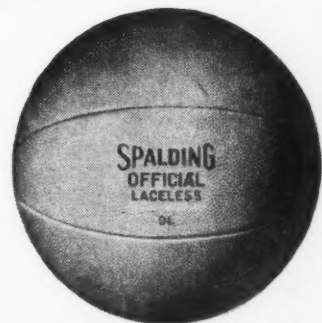
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SCHOLASTIC COACH

Reg. U. S. Pat. Off.

VOLUME 18 • NUMBER 3 • NOVEMBER

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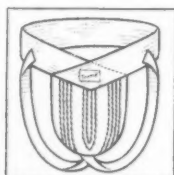
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NEXT to the Dodgers and Coney Island, Brooklyn's proudest possession is a razor-featured, Sinatra-sized, volcano of energy named Clair Bee. Clair coaches the Long Island University basketball teams, and to experts who know their dribbles best, he can't be beaten for developing round, firm, fully packed offenses.

If Bee isn't the best coach in the business, he certainly is the most educated. He owns more degrees than a thermometer. Among other things, he is a B.A., B.S., B.C.S., M.C.S., M.A., and C.P.A.

His versatility is as immense as one of his basketball centers. In addition to being dean of dribbles at L.I.U., he is assistant to the president, and director of physical education and athletics. He also lectures at coaching schools, makes eloquent speeches at the drop of a fried chicken, and writes books.

The fecundity of his pen is positively awe-inspiring. Clair has already propagated 15 technical basketball texts and, more recently, three juvenile sports novels. Nine more novels and a basketball yearbook are on their way.

Clair's invasion of the sacred precincts of Burt L. Standish and Ralph Henry Barbour gave us pause, until we saw the novels the other day. They are beauties—nicely written, absorbingly plotted, and chockful of helpful playing hints.

Take his basketball epic, *Championship Ball*, for instance. While following the saga of Chip Hilton at Valley Falls High, we learned how to pass, shoot, dribble, set up an offense, play zone defense, and stay in shape.

The resourcefulness and artfulness of Chip's mentor, Coach Rockwell, is pure bliss to contemplate.

Take the Parkton game, for example. A half-minute to go, score tied, Valley Falls' ball—and Coach Rockwell sends in big, slow Soapy Smith. Sounds like a bum substitution, doesn't it? But wait . . .

Valley Falls goes into a freeze

for 25 seconds. Then, with five seconds remaining, the ball is hooked to Soapy on the pivot. Soapy pivots to shoot and is fouled—just as Coach Rockwell, the old fox, figured. Soapy sinks the charity toss and it is all over.

Above the roar of the crowd, we detected a strange, threshing sound—the Merriwell boys rolling over in their graves. They would have shot one up backhanded from the locker room.

BESIDES being the Hemingway of the hardwood, Clair is famed for his genius at devising special offenses and defenses.

That's the biggest boot he gets out of the game. "The work on fundamentals, the constant drilling, isn't much fun," he told us recently. "The real thrill comes from outmaneuvering or outguessing the other guy."

Clair does most of L.I.U.'s scouting himself. He thinks nothing of hopping a plane and shooting out west for a look at a future opponent.

His most spectacular scouting expedition occurred toward the end of the 1939 season. With three games left to play and his team still undefeated, Clair knew he would be invited to play in the National Invitation Tournament at Madison Square Garden.

He also felt fairly certain that Loyola University of Chicago, unbeaten in 28 games, would also get an invite.

So Clair, one evening, flew out to Chicago for a look. He saw plenty—a 6-foot 9-inch monster named Mike Novak who set up directly under the hoop on defense and busied himself batting away the opponents' set shots.

Circumventing Novak was about as easy as playing bean bag with a couple of Chicago Bear tackles. The solution had baffled 28 opponents. But for a B.S., M.A., C.P.A., etc. like Bee, it was child's-play. A bell rang in his triple-decked brain,

and an idea was born.

The idea was catapulted several weeks later when, as Bee had foreseen, L.I.U. faced Loyola in the finals of the tournament. Right from the jump-off, the Blackbirds started moving the ball with lightning speed.

The strategy was to work the ball to the right side of Loyola's 2-2-1 zone defense, then put the ball up—aiming high up on the side of the backboard. In other words, banking the shot.

With only four men to go out after them, L.I.U. had all the time in the world to get set. Poor Novak couldn't get around to the side quickly enough and when he did, he found the ball beyond his reach. The L.I.U. sharpshooters had a field day that evening around the Maypole played by big Mike.

Clair modestly claims that this was perfect coaching.

AS you will note in his article on page 8, the Bee is a stout believer in adapting his system to the material. Before every season, he takes inventory of the stock on hand and the shipment coming up from the freshmen. He analyzes their abilities, then builds an offense around them.

He keeps detailed shooting charts of each player's attempts, conversions, and assists. "Don't know how we won a ball game last year," he confided to us, wildly waving a sheaf of shot charts. "Why, my highest scorer only hit for about 225 points—and we played 22 games." Since the records show that L.I.U. won 18 of those games, Clair must have had schmoos working for him.

But he'll need more than schmoos to come through the 1948 season with his sanity intact. The L.I.U. schedule reads like an elegy in a country churchyard.

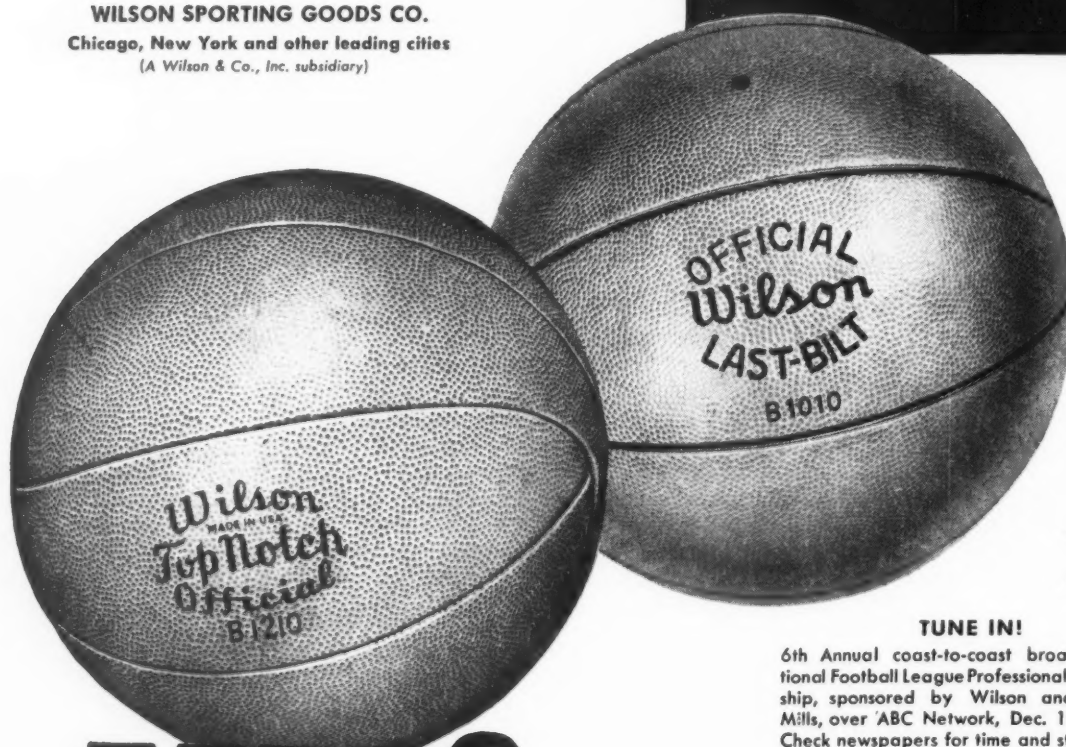
The Blackbirds take on St. Louis University, Oklahoma A. & M., Oregon, and Muhlenberg, twice apiece, plus Utah, Bowling Green, Santa

(Concluded on page 26)

In Every Play

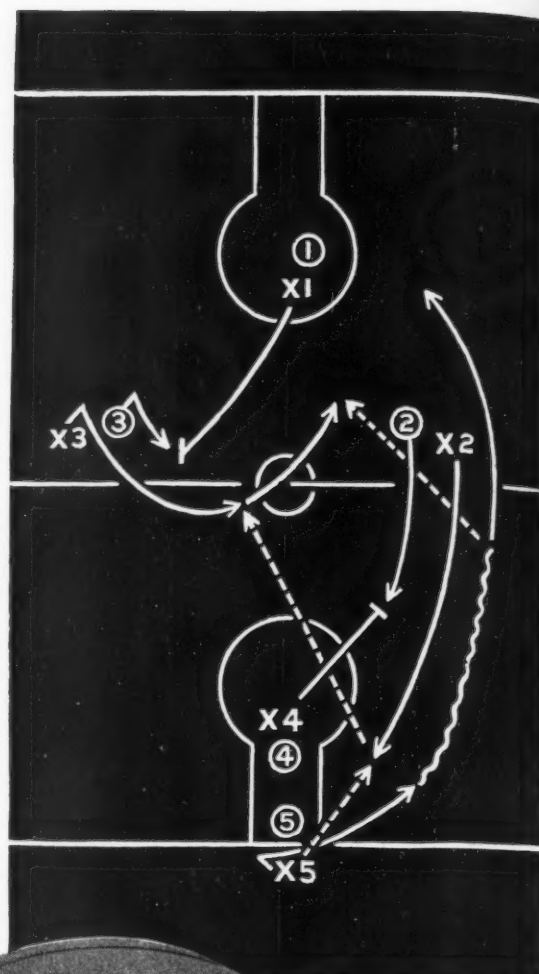
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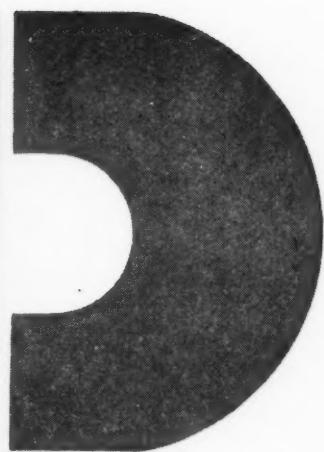
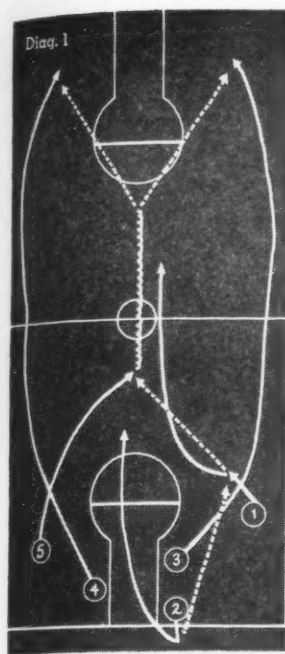


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Diag. 1
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PIVOT POST

Kentucky's Offense

By ADOLPH RUPP

KENTUCKY'S offense is predicated on the theory that a team should attempt to score as quickly as possible in a manner that restricts the chances of losing the ball.

We believe that as soon as a team gains possession, it should rush into defensive territory and try to score before the defense can get set—utilizing the minimum amount of passing, dribbling, faking, pivoting, and ball-handling.

Remember, every time a ball is passed, there is a possibility that it will be intercepted or deflected.

We like to take the ball off the backboard and pass out as long as possible. But we have a very definite pattern to our fast break. We try to carry the break as far as we can. If we find we can go all the way, we use it as our principal means of scoring.

Whenever the player balance isn't in our favor, however, we immediately go into a set offense and try to score with a deliberate pattern.

Let us take the situation after a completed free throw. Here is the set-up we like to use (Diag. 1).

No. 4 usually is our big center. He tries to tap the ball out to 5 (if the try fails). No. 1 positions himself farther out than 5, since he has two teammates in rebounding position on his side of the floor.

Soon as the free throw is made, 2 jumps out and makes a quick pass to 1. If 1 is covered, the pass goes to 5. Let's assume 1 gets the ball; 5 then cuts as quickly as possible in the manner indicated. He takes a pass from 1, straightens out, then dribbles in or passes to one of the cutters coming in from the sides.

No. 1 serves as a trailer and 2 acts as safety man.

As you can see, we try to get out as fast and as quickly as possible in a well-defined pattern. The same method of attack is employed after recoveries of missed field goal attempts.

Soon as our fast break is stopped, our boys flow into the pivot-post pattern shown in Diag. 2.

It is hard to tell just where the players will be at the start of the break. Let us assume a normal bal-

ance. That means 3, the center, will be in the vicinity of the basket along with the guards, 5 and 1. The two other men will usually be out on the floor. The sinuous lines in the diagram indicate the possible positions of the offense.

If 3 recovers the ball, he passes out to 4 or 2. If the ball goes to 2, player 4 cuts for the position near the center of the floor. He dribbles as far as he can or passes.

In this particular instance, he cannot go all the way in, so he pivots and passes to 1, a guard, then cuts for his position on the side of the floor. No. 3, the center, goes to his position and all the men are now lined up in their regular pivot-post offensive positions.

The guards, 1 and 5, maneuver so that they are near the sidelines when starting our guard-around plays. Forwards 2 and 4 assume positions directly opposite the free-throw line, while the center or post man, 3, generally operates in the front half of the circle.

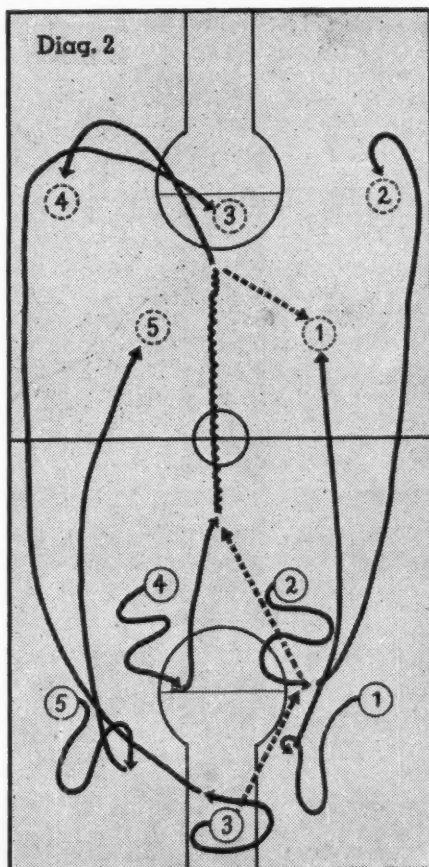
The guards are usually more versatile than the forwards. They are fast, excellent ball-handlers, and crack long shots.

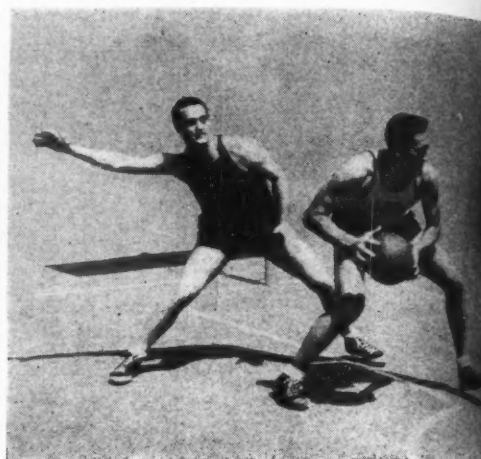
You can't win with this system unless both guards and forwards can hit consistently from their respective positions. Where every man is a threat, the defense cannot afford to retract. It must come out and play tight. This throws open the lanes for the guard-around plays.

We like the pivot-post offense best because we believe it offers the greatest number of scoring opportunities. It always keeps your good big man in excellent rebounding

(Continued on page 52)

Diag. 2





BENCH STRATEGY

LIKE most coaches, I gradate my practice program — starting with an intensive course on fundamentals and gradually working up to our system of team play.

At one time I thought that was enough; that once the season started my job resolved itself into keeping the players physically and mentally fit, and making good substitutions.

You live and learn, and I have learned this: To develop your team properly, you must spend a great deal of time preparing them for the little strategies which may be needed to meet certain game situations.

How many coaches, for example, give any thought to the arrangement of their bench? Trivial as it may seem, this is important. The behavior of the coach on the bench is watched by friend and foe alike, and it will behoove the coach to have his bench completely organized before the first game.

As the coach watches the game, he knows pretty well what substitutes will have to be made. It is wise, therefore, to shift the reserves on the bench so that the problems they will be called upon to meet

can be brought to their attention.

At L.I.U., we have always made it a practice to seat the men who will be next to enter the game on each side of the coach. When one of these players is substituted his position on the bench is taken by the boy coming out.

Most players coming out consider their substitution a form of criticism and a reflection on their ability. It is hence important to let every player know that substitutions are made principally for strategic purposes and not because of bad play.

The boy replaced seats himself at my side. If some suggestion is in order, it is not given immediately. I wait until play resumes. I can then safely discuss the problem without fear of any misunderstanding on the part of onlookers and friends.

L.I.U. has no set attack which it sticks to from year to year. Our offense is adapted to the material. We look for an attack that best exploits the strength of the returning veterans and the newcomers.

After a week or two of practice, we know pretty well whether the planned offense and defense may be counted upon.

By **CLAIR BEE**

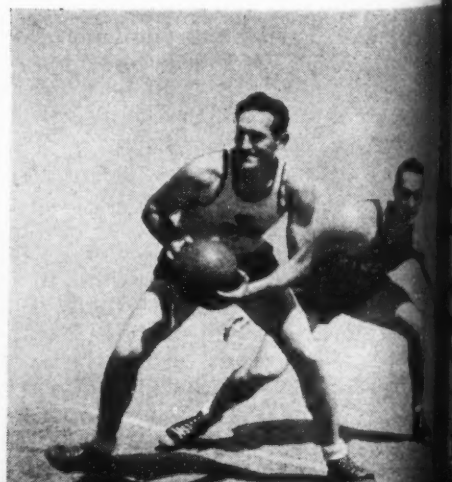
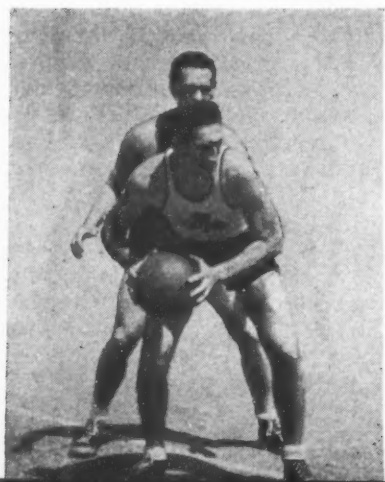
Coach, Long Island University

For many years, I devoted the first month to conditioning and fundamentals. Then I discovered that the time remaining was insufficient to ready the team defensively and offensively for the first game. I immediately changed my planning and now we start working on team play the first day.

When everyone is set with respect to the basic system, we turn to the variations. These variations are the tools employed from the bench during the progress of the game. Without them, we can only substitute with the hope that a boy will play over his head to meet a given situation.

The basic attack is usually set up so that it may be employed against a set man-to-man, a switching defense, or a 2-1-2 zone.

Starting with man-to-man principles we develop a defense which calls for the matching of players according to the opponents' height, speed, scoring, passing, and dribbling abilities.



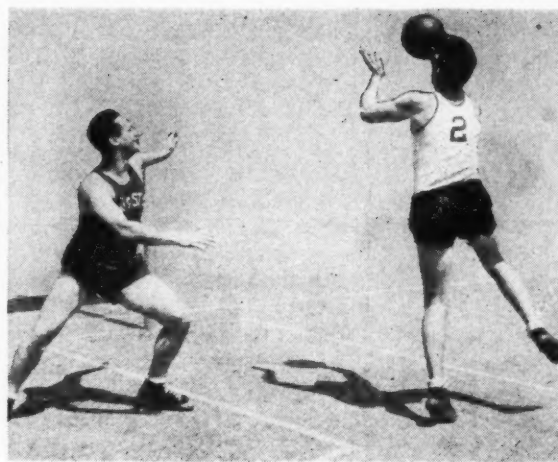
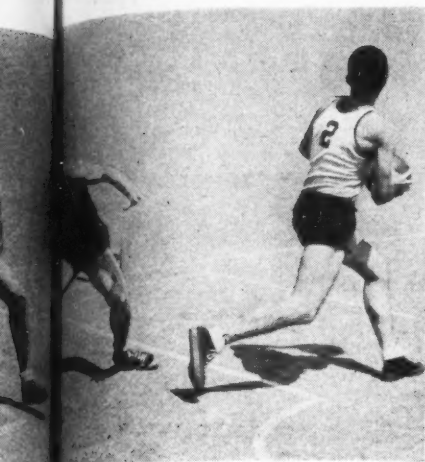
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We employ a switch in this basic defense, but the trading of men is always determined by the defensive player closest to the basket. Once all our men are in position, no other man may call the switch.

This definitely places the responsibility, so that both myself and the players on the bench can immediately determine who is at fault on any particular play. This is vital in any man-to-man defense which incorporates switching.

After we have mastered the basic man-to-man defense with the switch principle, we turn to what we call the "screen-switch" defense. Developed by the late George Keogan of Notre Dame, this defense calls for a switch of opponents every time an offensive player screens between another attacker and a defensive man. At no other time is this screen-switch employed.

Next we move to the zone defense. All types of zones are discussed and practiced but only one is added to our team repertoire. The squad personnel usually determines whether it shall be a 3-2, 2-3, or 2-1-2. More often than not, we will finally adopt the 1-3-1 which L.I.U. has developed to such a high degree of efficiency.

After the team attack and defense has been developed, we go on to two very vital team maneuvers which frequently spell the difference between evenly matched teams.

These are pressing and freezing the ball.

The team which retreats when behind in the score with time running out, is going nowhere—fast. Possession of the ball is imperative, and an aggressive all-court man-to-man press must be employed.

In this pressing defense, we try to utilize the same principles as that of the screen-switch defense. The players switch every time an opponent screens. This is a definite rule and no exceptions are made.

On out-of-bounds balls, the player handling the ball is guarded aggressively. At one time, we used to drop the man guarding the thrower back into the court in the hope of picking up a loose man or intercepting the pass-out. But experience proved that better results could be obtained by playing the outside man tightly.

(Keep in mind that the outside man is permitted only five seconds to put the ball in play and that an aggressive waving of the hands may produce a bad pass—and possession.)

In the closing minutes of play, it is often necessary to protect a lead against a team making a strong rally. It is hence important for a team to know how to freeze the ball.

But that is only half the story. How soon should the freeze be started? How much of a lead is

(Concluded on page 70)

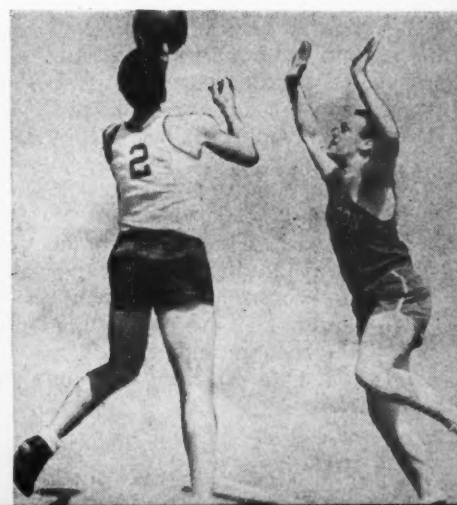
ABOVE

A good pivot man should be able to put 'em up with either hand. If he can shoot only with one, a smart opponent will concentrate on his strong side and ruin the effectiveness of his shooting. The pictures show how an ambidextrous pivot man may spell m-u-r-d-e-r to the defense. First comes the pivot shot to the left. Upon receiving the feed-in pass, the man fakes right with ball, head and shoulder—bringing the guard over in that direction. He then quickly takes a long step to the left, pivots toward the basket, and puts up the ball with his right hand (off the left foot).

BELOW

After the guard has had a taste of the pivot man's right hand, he usually will become unduly sensitive to it—and thus become easy prey to a shot in the opposite direction. The pivot man now fakes left with ball, head and shoulder—and the guard immediately steps over to cope with that deadly right hand. But the pivot man quickly recovers, steps to the right, pivots and lays up the ball with his left hand (off the right foot). Note, in both sequences, that the feet remain stationary during the faking action. This facilitates the pivot and protects the player against running.

Pictures courtesy of the Quaker Oats Co.



Material and System

By HOWARD HOBSON

Coach, Yale University



EVERY coach yearns for ideal material and is constantly looking for the perfect combination for his offense. But all coaches do not agree on just what this ideal combination and ideal material should consist of.

Me? I look for a combination of speed and size, with particular emphasis on the latter. Granted that players must have reasonably good coordination and some natural ability, but these and other factors may be developed. Speed and size, on the other hand, can be improved but little.

Regardless of the quality of the material, the coach who can get the best out of what he has, will usually wind up near the top. Adjusting the material to the system and vice versa, is a major coaching problem. More often than not, however, a coach can, with minor changes, fit the material to his favorite system. This is much wiser than converting to an entirely different system which both the coach and the returning players are unfamiliar with.

The following combinations of speed and size are the most common coalitions that coaches have to work with.

1. *Three big men and two smaller fast men*—the ideal combination.

(a) Ideal for fast break illustrated in **Diag. 1**.

(b) Use set plays that do not require five men moving and do not pull big men away from offensive board. Use big men for screeners and rebounders. Use small men as set shooters and cutters. Plays in **Diags. 3-4** recommended.

2. *Two big men and three smaller men.*

(a) Ideal for fast break shown in **Diag. 2**.

(b) Use set plays that have three men moving and utilize two big men for rebounds. Variations of the double post are good. Plays in **Diags. 5-7** recommended.

3. *One big man and four smaller men.*

(a) Either fast break may be used, but success will depend on beating defense back for quick scores, since rebound strength is weak.

(b) Use single pivot with big man in bucket and four men moving. Ideal for four-man weave, give-and-go game, etc. Use set shots with caution because of weak rebounding strength. See **Diag. 8**, also **Diags. 5-7**.

4. *Four big men with one small man* (not recommended unless at least one of big men is fast and exceptional ball-handler).

(a) Utilize **Diag. 1** fast break if one of big men is fast and can handle ball. Long pass break may be possible. Rebound strength is strong.

(b) Set plays should utilize rebound power. Not good usually for a moving offense. Set screens, double or triple post plays are best. See **Diags. 5-9**.

5. *Five big men* (not recommended unless at least two are fast and exceptional ball-handlers).

(a) Utilize **Diag. 1** fast break if two of big men are fast and can handle ball. Great rebound advantages.

(b) Use set plays that employ rebounding. Double or triple post plays and set screens. Use set shots to exploit rebounding strength. See **Diags. 5-9**.

6. *Five small men* (the long, hard winter combination). Hard to win with team like this but not impossible. By playing all-court defense against bigger opponents, a team like this may regain possession often.

(a) Fast break must be used with great caution, as rebounding is weak. If break is used at all, team must score directly by beating defense back.

(b) Set plays should utilize five men moving. **Diag. 3**, using single pivot and changing pivot men, recommended. Also, formation such as **Diag. 10** that spreads defense and facilitates quick cuts into basket.

Ball control, short sure shots, and lots of courage and luck, must be the ammunition for this type of team.

The following brief captions will help you follow the diagrams.

Diag. 1, Fast Break: Note that 2 and 4 have options. No. 5 is big man, and trails play, staying directly behind ball. Front men go back to meet pass from trailer.

Diag. 2, Fast Break: No. 5 gets rebound and 1, 2 and 3 meet ball. Nos. 4 and 5 trail and rebound at end of break, while 2 and 3 come out for safety after shot.

Diag. 3, Post Play: No. 2 passes to 5 who meets ball, then makes quick or delayed return pass to 2, depending on defense. No. 5 may also follow 2 around for shot, or pivot to opposite side and shoot. Nos. 1 and 4 take men up court, then go in for rebounds. If X1 or X4 switches, No. 5 passes to open man.

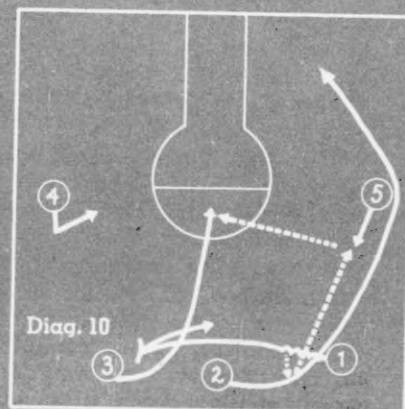
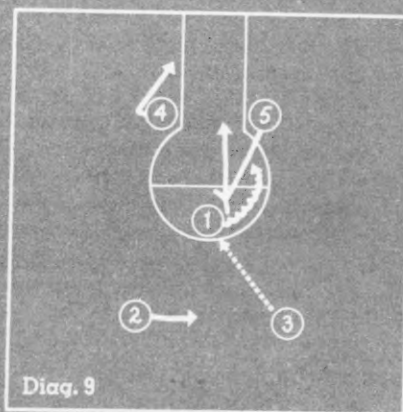
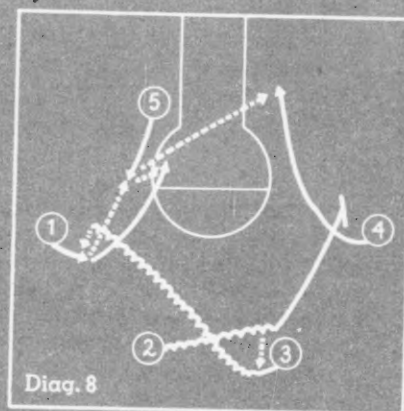
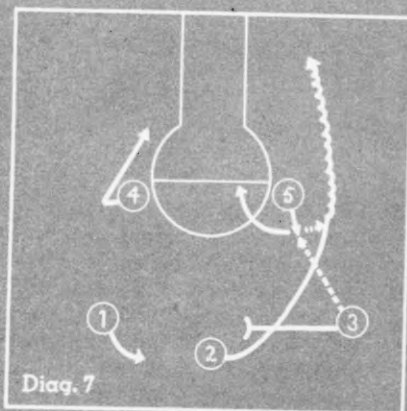
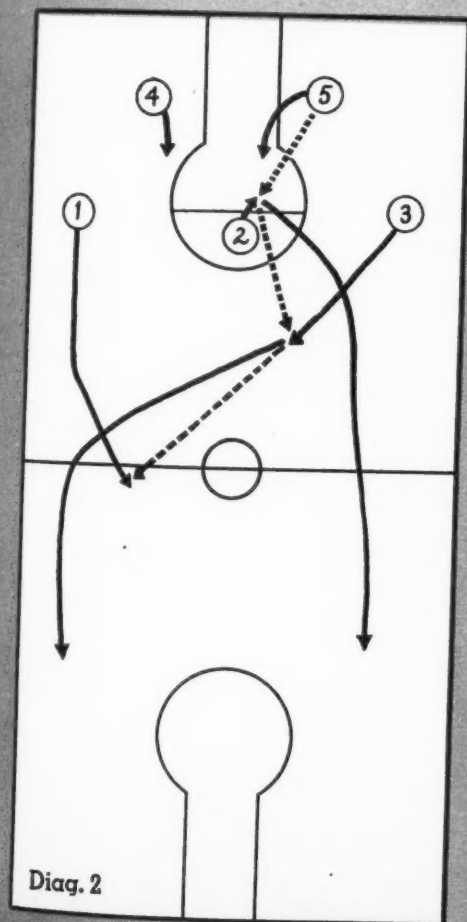
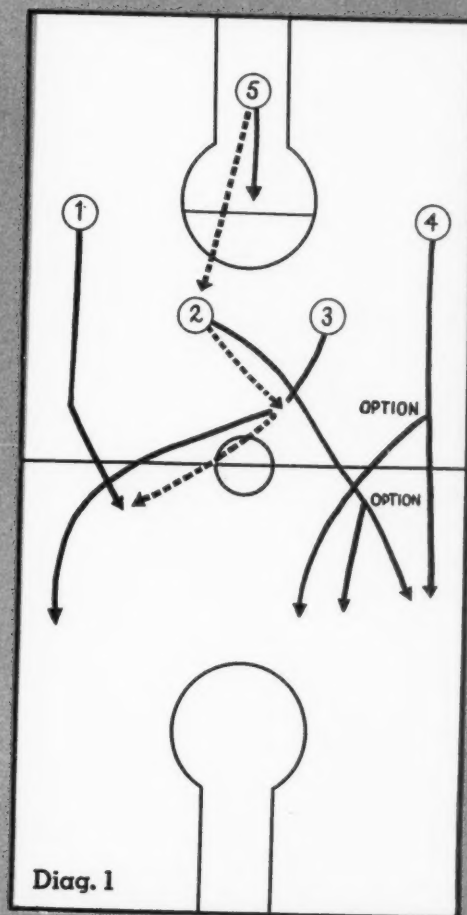
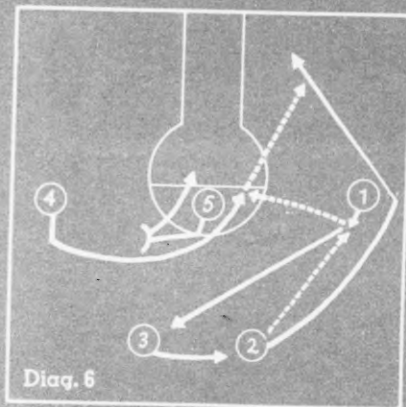
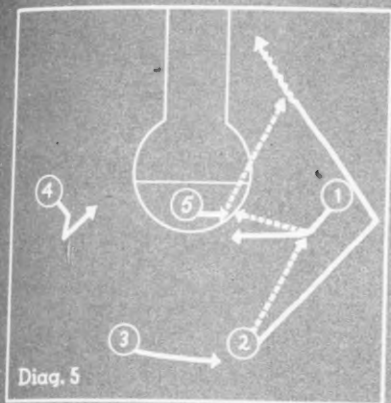
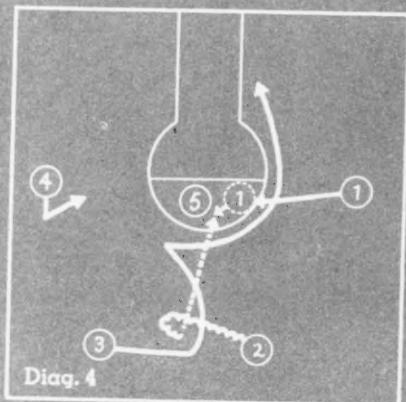
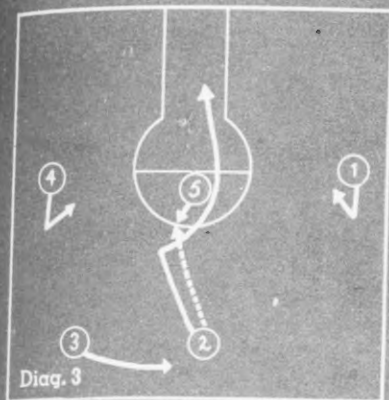
Diag. 4, Double Post Variation: No. 2 dribbles inside 3, which is signal for 1 and 5 to come together. No. 3, after receiving pass from 2, feeds to spot between 1 and 5 and cuts around 1, running his man into blockade. No. 1 may hand ball to 3, or may follow 3 around and shoot, or hand ball to 5 who may follow 3 around, or 1 may shoot over 5 to left side.

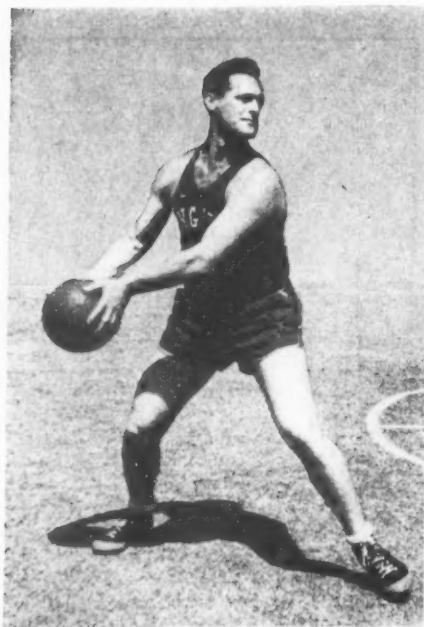
Diag. 5, Single Pivot: No. 2 passes to 1 who fires to 5 coming to meet ball. Latter may hand ball back to 1, shoot, or follow behind 1 and shoot. No. 1 also has options—instead of passing to 5, he may hand off to 2 or pass out to 3 coming over behind play.

Diag. 6, Single Post Variation, a Continuity: As 2 passes to 1 (and cuts as in **Diag. 5**), 5 elects to screen for 4. No. 1 passes to 4 who may shoot or pass to 2. No. 1 comes out as safety and 3 replaces 2. If play is stopped, ball goes out to 1. No. 2 then returns to position of 1, while 5 and 4 exchange spots and entire pattern is repeated.

Diag. 7, Double Post: No. 3 passes to 5 who meets ball, then 3 cuts over for screen on X2. No. 2 cuts hard to outside and takes pass from 5. Nos. 4 and 5 rebound, and 1 and 3 act as safeties.

(Concluded on page 54)





MOST coaches agree that, as a rule, winning basketball is founded on the quality of the player rather than on the quality of the system. If we may accept this as a premise—and I think we can—it behooves every coach to give his boys a thorough schooling on the fundamental skills.

The college coach is more fortunate in this respect. Most of his players are pretty sound, fundamentally, so that more of the practice time may be devoted to organization and system.

The high school coach, working as he does with raw material, must concentrate upon the development of the individual, polishing each boy to a superlative degree.

Remember (1) that excellent players make excellent systems; (2) that mediocre players cannot make an excellent system; and (3) that excellent players can often make a

mediocre system a winning one.

With the development of the individual skills as our guiding principle, we here at St. Louis U. High strive to implant in our boys certain basic defensive and offensive abilities, as well as a thorough knowledge of game situations, rules, and various offensive and defensive systems.

Our objective, in other words, is the development of both mechanical and mental skills.

Of all the elements that enter into offensive basketball, passing is perhaps the most important. Without passwork, there can be no teamwork; and without teamwork, there can be no championship teams.

Before taking up the basic passes one by one, let us delve into the strategical aspects of the passing game.

In delivering the ball, the player must relax, throw accurately, not

Passing Tho

too hard, and must deliver the ball in a way that will enable the receiver to keep his body between the ball and the man guarding him.

Against a small team or a small defensive man, it is a smart idea to keep your passes high. If your opponents are taller, keep your passing low.

Very often the opponent will take a position directly between you and the receiver. You will now have to cover or protect your pass. If you intend to bounce pass, feint a high throw, then pass under the man. If you intend to pass high, feint a low throw first.

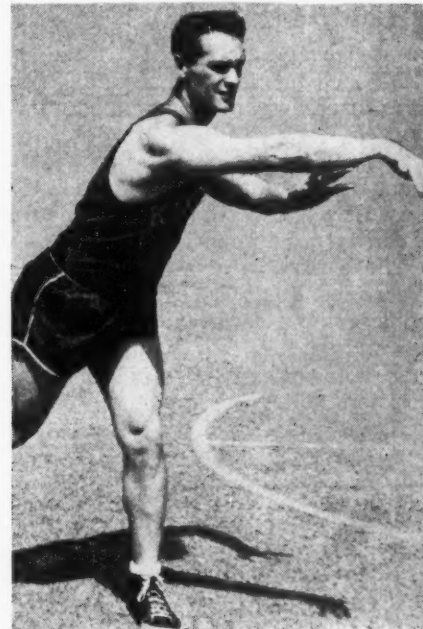
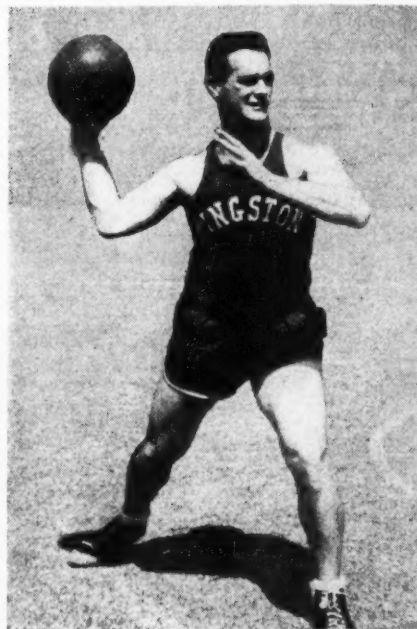
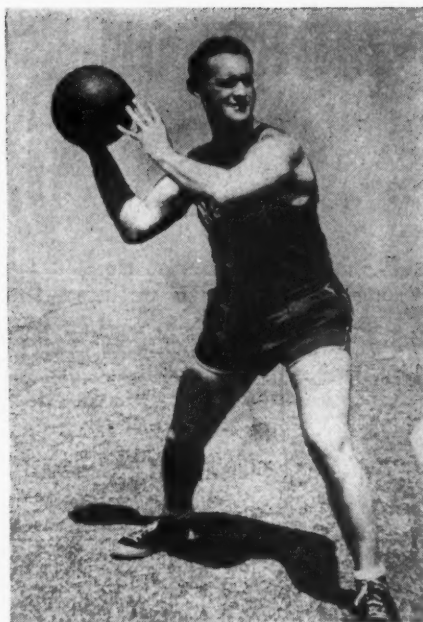
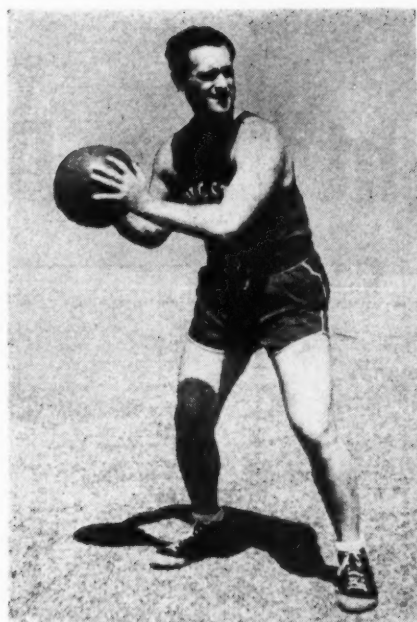
Hook passes are particularly effective against small teams, while bounce passes are recommended

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BASEBALL

gThoughts

By **GEORGE V. HASSER**

against the unusually tall opponent.

Always protect your passes with some piece of artifice. Don't make a habit of looking directly at your receiver before passing to him. Particularly if the opponents are hawking you. A good bunch of defensive ball-hawks can anticipate these throws and intercept many of them.

The idea is to look one way, then pass to another. Employ head, eye, body and leg feints. Use split vision. Keep the defense guessing and you will have few passes intercepted.

If a teammate is in a better position than you are to advance the ball or shoot, whip the ball to him immediately. Don't delay until he is covered.

Passing opportunities fade almost

as quickly as they materialize. Eye, mind, and will must coordinate simultaneously. The eye must see the pass situation; the mind must recognize it; and the will must put the ball into the air at once.

Do not have favorites to pass to; always pass to the best man open. If you find you can team up particularly well with one or two specific teammates, it is all right to look for them. Just don't overdo it.

As a rule, don't loop or lob your passes. These slow ones are easily intercepted, especially in crowded areas and when unaccompanied by a fake.

Do not save a ball from going out of bounds unless you are certain you can bat it to a teammate or keep possession yourself. Too often, when trying to prevent the ball from

going out, you may bat it to the opponents. To make it worse, your momentum may carry you way over the sideline; and before you can get back, the opponents can be in for a basket.

If you find yourself under the hoop with the ball, look for your shot. If you can't get one off, pass back. You will generally find a teammate at the head of the lane who is open for a pass and a nice short set shot.

Go easy on tip-in shots after rebounds. Few shots are made this way and many opportunities in which teammates could score, are missed. It is much wiser to pass out and set up a screen.

Also avoid long cross-court passes. This type of pass is loaded
(Continued on page 50)

MORE ON

Straight Line Defense

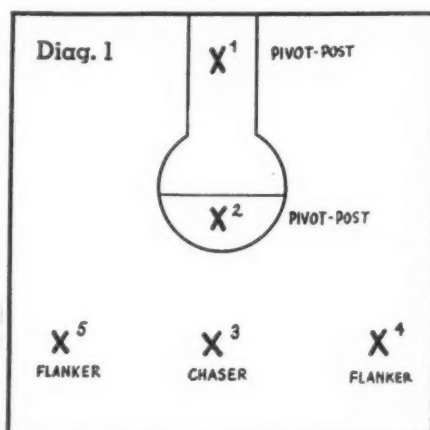
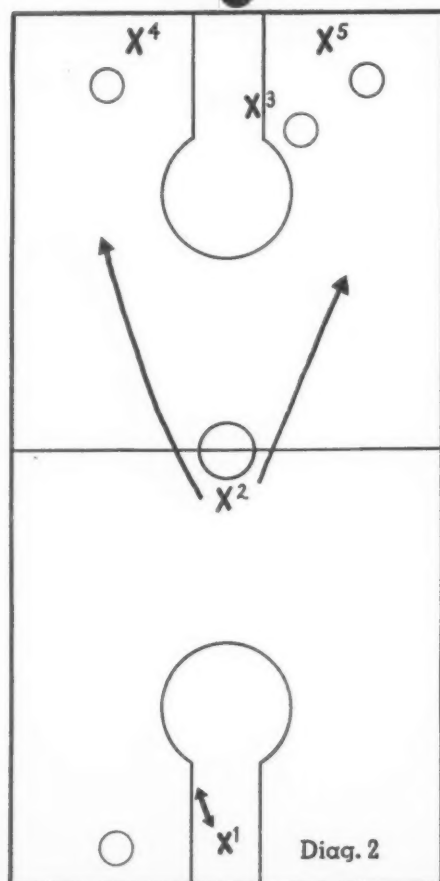
IN last December's *Scholastic Coach*, the author outlined the principles of a radical system of guarding called the Straight-Line Defense. Not a man-to-man, not a zone, this was a ball defense whose keynote was *attack!*

The article must have made quite an impression, for the author, ever since, has been swamped with mail from all parts of the country pleading for more details. That is the purpose of this article.

Since space forbids a complete recapitulation of the basic principles of the straight line defense, the author recommends that the reader refer back to the original article before attacking the present discussion.

Basically, the straight-line defense attempts to sap the attack by crowding it into the middle, where it can be easily checked.

The basic positions of the defense are called home bases, and are set up as shown in **Diag. 1**. It should be understood, however, that the men will seldom be found in these positions, since the movement of the ball will pull them away.



Why have these homes bases, then? Simply because the defense, being neither a zone nor a man-to-man, must have guide lines in order to preserve some lineal balance with the side and end-lines.

By shifting the lateral line (4, 3, and 5), a full warp similar to that of a zone is accomplished. By shifting the horizontal line (1, 2, and 3), another shift of the same pattern is realized.

The greatest strength of this defense is realized in the *offensive* half of the court. Let us suppose X has just scored a field goal (**Diag. 2**). Immediately X4, X3 and X5 set up between the outside man and the offensive players. X1 returns to his home base to take care of the offensive player who has gone down the floor, while X2 returns part way in position to intercept a long pass.

X3 takes a strategic position on the outside man. He does not interfere or guard him, but plays the best angle of interception in relation to the nearest other opponent.

There are thus four defensive men on three attackers. They force the offense away from the side and end lines and make them break into the middle congested area, where the middle straight line (X3, X2, and X1) can intercept.

Now let us suppose the offense succeeds in making a successful entry onto the court (**Diag. 3**). X3 and X4 promptly attack the ball, tying up the receiver. They don't hack at the ball but slap at it with an upward motion. That is, if they can't actually put their hands on it.

They try to make the receiver throw toward X5's and X2's inter-

cepting areas. X1, if he fails to intercept the ball, must reach Base No. 1 before the offense gets there, while X2 retreats to Base No. 2 only if X3 and X4 lose their battle and X5 fails to intercept.

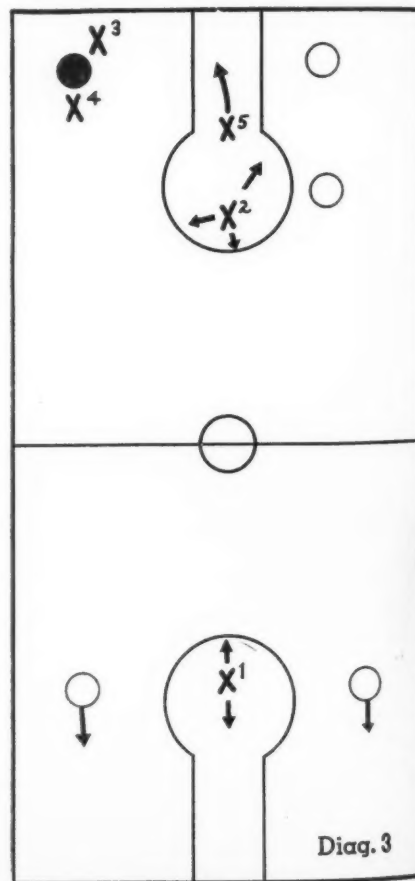
Diag. 4 (p. 16) offers a development of this defense when the offense, with the exception of the receiver, has come all the way down the court.

X4 and X3 attack the ball, leaving X5 and X2 as the principal pass interceptors. X1 covers Base No. 1 for all close-up shots. Whenever he is forced to leave this base, it must be filled by X2.

Assume, now, that the offense has worked the ball into the front court. **Diags. 5 and 6** illustrate how the defense may adjust to the movement of the ball right and left, respectively. Note how the defense blocks off all the passing lanes.

Diag. 7 shows how the defense sets up when the ball is out of bounds under the defensive basket, and **Diag. 8** outlines the set-up against an outside ball along the side line.

The idea is to make the offense throw a long pass to get the ball



By Chuck Lappenbusch



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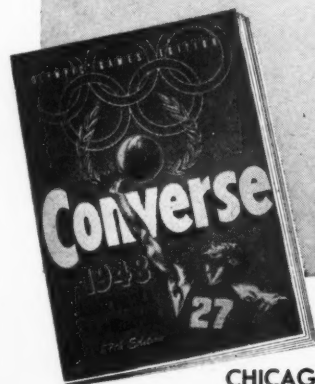


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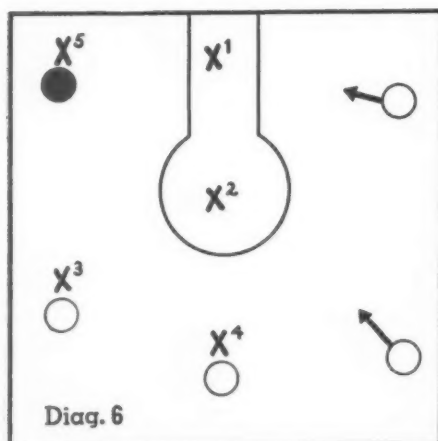
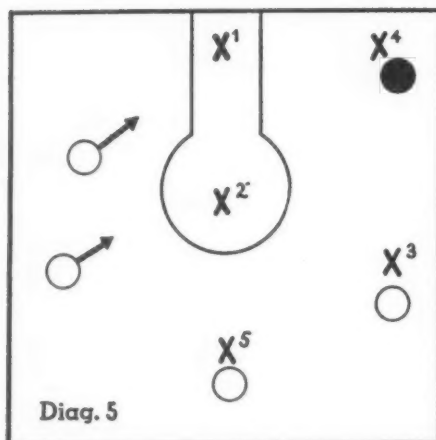
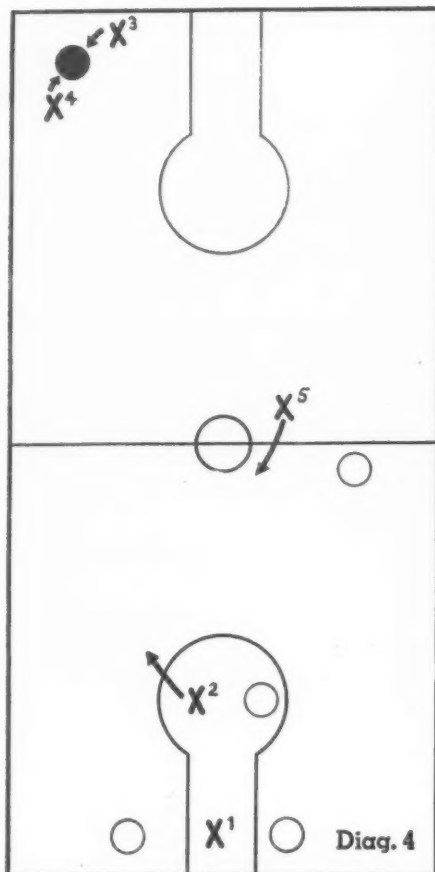
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Diag. 4 shows how the straight line meets an opponent that has come all the way down the floor; while 5 and 6 show how the defense adjusts to movements of the ball to the right and to the left.

in bounds. X3, X5, and X4 all block the attempts of the offense to come in from the outside, while X2 and X1 act as the principal interceptors.

As you may see, the straight line enjoys the same advantages of the zone defense plus a greater potentiality for interceptions.

The strong points of the straight line defense may be summarized as follows:

1. It forces the offense to converge, thus reducing the defensive checking area.

2. It employs an attack psychology at all times, especially when the opponents attempt to put the ball into play after a basket. It then pits five men against four.

3. It is practical both when behind in score and when ahead.

4. It makes the offense commit itself.

5. It is powerful against both fast-breaking and slow-breaking attacks.

6. It reserves the strength of the big pivot men for backboard play.

7. A coach with two mediocre teams can beat a squad with only one good team by forcing the play and "pooping" them out.

8. It always covers the basket against close-up shots.

9. It permits quick baskets through frequent interceptions.

10. It furnishes an excellent surprise against unprepared offenses.

11. It is easy to teach to green material.

12. It rushes shots, passes, and dribbles from the back as well as from the front, exasperating the ball-handler and thus upsetting him.

Here are some of the weak points of the straight line, which should be carefully considered before the defense is adopted:

1. It produces excessive fatigue and, therefore, is not recommended for junior high school play unless adjustments can be made.

2. It is a team defense and coordinated interceptive play is hard to teach. However, individual responsibilities are easy to allocate.

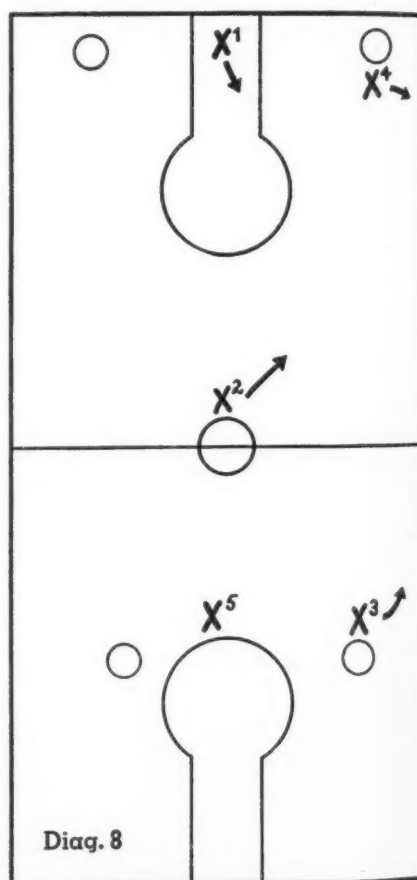
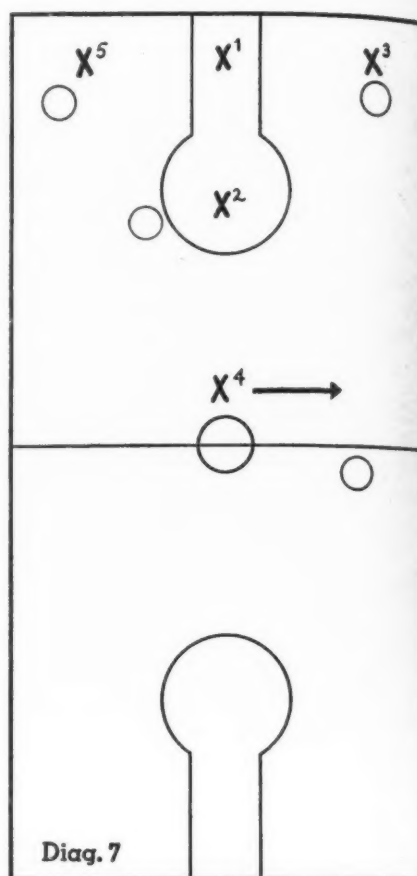
3. It hampers your own offensive game.

4. The flankers and ball chasers must be rested frequently, necessitating at least a good eight-man squad.

5. It ruins fancy methodical and systematic offenses and produces a rough driving fatiguing type of play.

6. An ordinary opponent with rough and highly aggressive players can give this defense trouble.

Charles F. (Chuck) Lappenbusch, director of athletics at Western Washington College of Education, employed this revolutionary down-court checking system very devastatingly in his basketball coaching days at W.W.C.E.

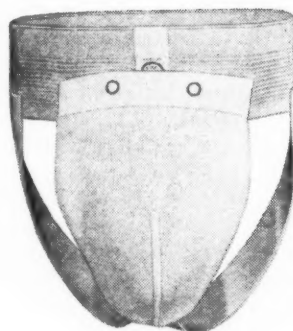


Diag. 7 delineates the defensive set-up when the ball is out of bounds under the defensive board, and Diag. 8 depicts the set-up against an outside ball along the sideline. Defense keeps foe out.

INSPECT THEM...COMPARE THEM...see why

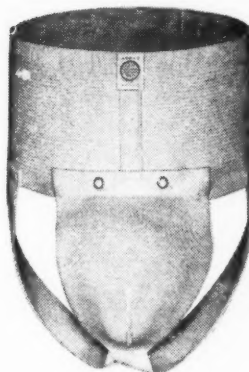


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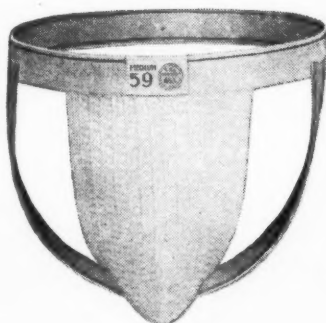
- Pouch made from inside out, forms tube with no rough edges
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- 1 1/4" leg bands

BIKE NO. 54 CUP SUPPORTER



- Same as No. 53 but with 6 1/2" waistband for extra support
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- Pouch has no rough edges to chafe or irritate
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- Pouch actually softens with laundering

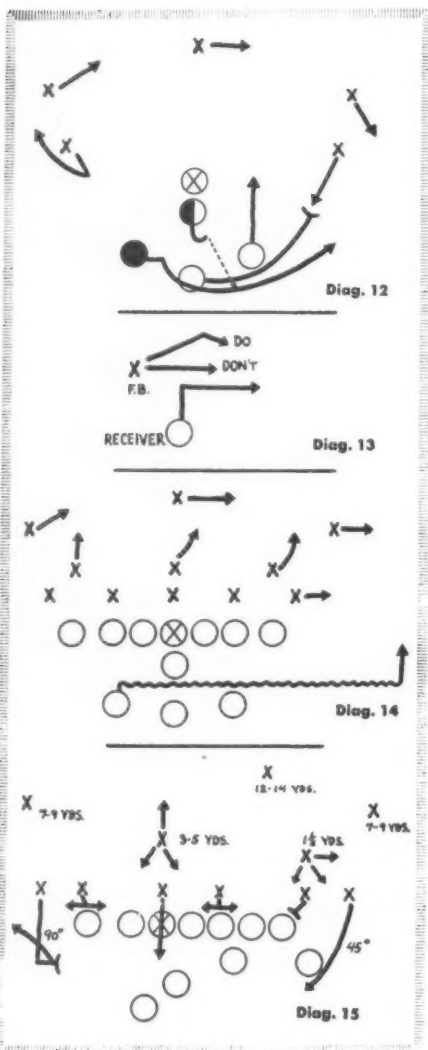
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- Gives maximum protection and comfort in all strenuous athletics and contact sports



Georgia Tech Pas



COACH Bobby Dodd uses a strict zone pass defense. He does not believe in switching or changing assignments.

As the opponents near the goal line, Tech tends to tighten up and not play so deep and loose. As a pass develops, the three deep secondary men start back pedaling while keeping their eyes on the passer.

The safety man is the center fielder and does not attempt to cover closer than 12 yards. But he is responsible as deep as 60 yards.

The halfbacks line up a little outside their defensive ends. As the receivers come down, the halves keep one yard to their outside and do not let the receiver get closer than three yards. They never turn inside until the ball is thrown. They concentrate on interceptions and go for the ball at the highest level they can catch it.

If the play looks like a run, the secondary rotate toward the ball along with the off end. Let's assume the run is to the right (Diag. 12).

That means the left half comes up to meet it under control, while the safety comes across laterally, keeping the play in front of him. The right half drops back and over, and the off end retreats slowly over the ground he penetrated, looking for naked or delayed reverses and delayed receivers to the short side.

The secondary pay more attention to the ball and backfield than they do to the ends coming down. They employ split vision to watch the whole field.

The halfbacks team with the defensive end on their side. If the end floats, the half favors the inside. If the end smashes, the half favors the outside. One end drops and covers in the flat, while the other always smashes. This varies with the defensive signal.

When playing a tight 6, the defensive fullback has outside responsibility. He gives ground and then comes up on the receiver rather than chase him on a flat line laterally (Diag. 13). This saves

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By FLOYD SCHWARTZ



h'Pass Defense

catches and touchdown runs by the short flat receivers, since fast opponents can turn and outrun men on an inside line with them.

Against the T, Coach Dodd favors the 5-3-2-1 because of its flexibility (Diag. 14). If a man goes in motion, the halfback on that side loosens up and remains conscious of him. The safety also adjusts slightly in that direction.

The idea is not to dislocate the backers-up, or the T will riddle you with quick openers.

The end on the side of the motion loosens up slightly, while the corner backers-up play in front of the offensive ends—in excellent position to tackle and slow down the ends.

The center backer-up rushes or covers over the middle, slightly fanning to the open side of the field according to the signal.

The first responsibility of the safety and defensive halfbacks is always pass defense.

Against the single wing, Coach Dodd favors the over- and under-

shifted 6-2-2-1 modeled after that used by his famous college coach, General Neyland of Tennessee.

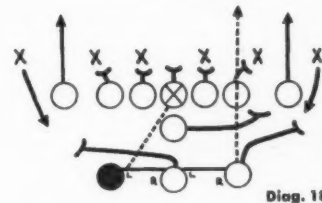
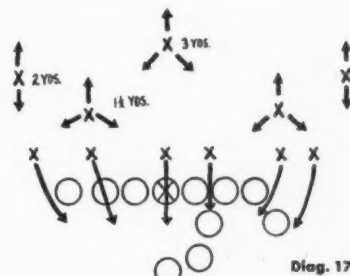
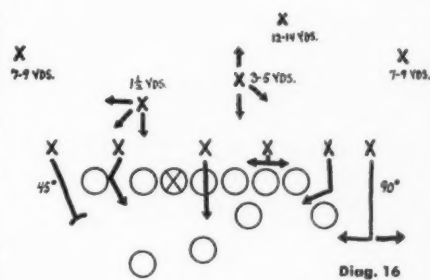
The undershifted 6 is shown in Diag. 15.

The left end drives in on a 45-degree angle over the outside shoulder of the wingback. The left tackle drives over the offensive right end from an outside-in angle, while the left guard controls the offensive inside tackle with an arm shiver and, after diagnosing the play, drifts along the line.

The right guard drills hard and low over the offensive center. The right tackle hits and controls the left end, then plays a drifting game along the line. The right end penetrates $3\frac{1}{2}$ yards at a 90-degree angle, then turns in to meet the play from an outside-in angle. He covers the short flat on passes.

The defensive center lines up 3 to 5 yards behind the smashing right guard, and covers the middle alley against passes. The fullback

(Continued on page 20)



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R. D. Conner of Davenport, Iowa, is enthusiastic about the change he made from coaching to Field Underwriting with The Mutual Life. He says:

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S-37

lines up 1½ yards behind the defensive left tackle and fills holes inside and outside on passes.

The defensive center lines up 3 to 5 yards behind the smashing right guard, and covers the middle alley against passes. The fullback lines up 1½ yards behind the defensive left tackle and fills holes inside and outside on passes.

The deep secondary play zone on passes, with the left half and safety favoring the strong side according to the offensive wingback and right end combination. The halves deploy 7 to 9 yards back, slightly outside the defensive ends, while the safety plays 12-14 yards back slightly inside the defensive left tackle.

In the overshifted 6 (Diag. 16), the line moves left and the backers-up move right. The left end now penetrates 3½ yards on a 90-degree angle and covers his left flat on passes. The left tackle charges the wingback and tends to fight inside.

The left guard hits and controls the outside tackle, then plays his drifting game, while the right guard drills over the offensive right guard hard and low.

The right tackle steps at the left end from an inside position (with his right leg) and tends to cover the inside without penetrating. The right end crosses on a 45-degree angle and plays a sharp, rushing game on passes.

The defensive center plays 1½ yards back, slightly inside his right tackle, and drives in fast on runs inside and outside his tackle. He covers the short right flat on passes.

The defensive fullback drops off 3 to 5 yards between his guards, and covers the center alley on passes. The halves and the safety play the same as in undershifted 6.

Diag. 17 outlines a goal line defense against a balanced line single wing, which may be used inside the 10-yard line or anywhere on short yardage downs.

The line charges sharp and hard, as diagrammed, with the ends being careful not to be hooked by the wingback or offensive left end. The halves play 2 yards off the line and come up fast on runs. The five secondary men drop straight back on passes and play a strict zone.

KICKING GAME

The Georgia Tech coach subscribes to the theory that with practice any normal boy can learn to kick. It is under pressure that some tighten up and kick poorly and erratically. Dodd wants a consistent 40-yard pressure kicker. He believes that with a high kick he can

gain a net of 38 yards, allowing an average of 2 yards for the runback.

On first, second or third down, the punter will not kick on a poor center snap or when unduly rushed. He will run the ball or throw it out of bounds down the field.

On fourth down, his rule is to kick it somewhere but get it off quickly.

Dodd practices fourth-down kicking under pressure. His kickers line up with their feet slightly spread to assure mobility on bad passes. They set up 10½ yards back on first, second, and third downs, and about 9 yards back on fourth down.

If the kick is to go right, the punter lines up behind his left guard. If it is to go left, the man lines up behind his right guard. This puts him in the correct middle pocket for the kick. On all but fourth down, the punter kicks line drives away from the safety man. Inside Tech's 35-yard line, the man kicks out of bounds.

TECH'S QUICK KICK

Dodd's quick kick is unique but highly successful (Diag. 18). The left half does the kicking. He lines up in his normal T position behind his tackle, but a yard deeper (4½ yards back). The center delivers the ball to the left of the quarterback (not through his legs) direct to the left half.

The half pivots right as the ball comes back, by dropping his right foot back. He receives the ball facing the right sideline with his feet spread and the right foot slightly forward. He then steps toward the sideline with his right foot, takes a full step with his left, and kicks the ball.

The ball is held with the left hand on the front end and the right hand on the rear, so that the long axis points downfield. The kicker hits the ball back of the middle to get an end-over-end effect.

This type of kick has three distinct advantages:

1. It is not tipped off by the kicker dropping back before the snap.
2. The kicker moves laterally and not forward into the line.
3. The end-over-end gets a terrific roll over the unsuspecting defensive halfbacks.

If the safety man tends to react to the right, the kicker may face somewhat forward and kick accurately to the left of the safety.

The protection is as follows: The fullback steps up and protects to the left. The right half takes the defensive left end, while the quarter

(Concluded on page 57)

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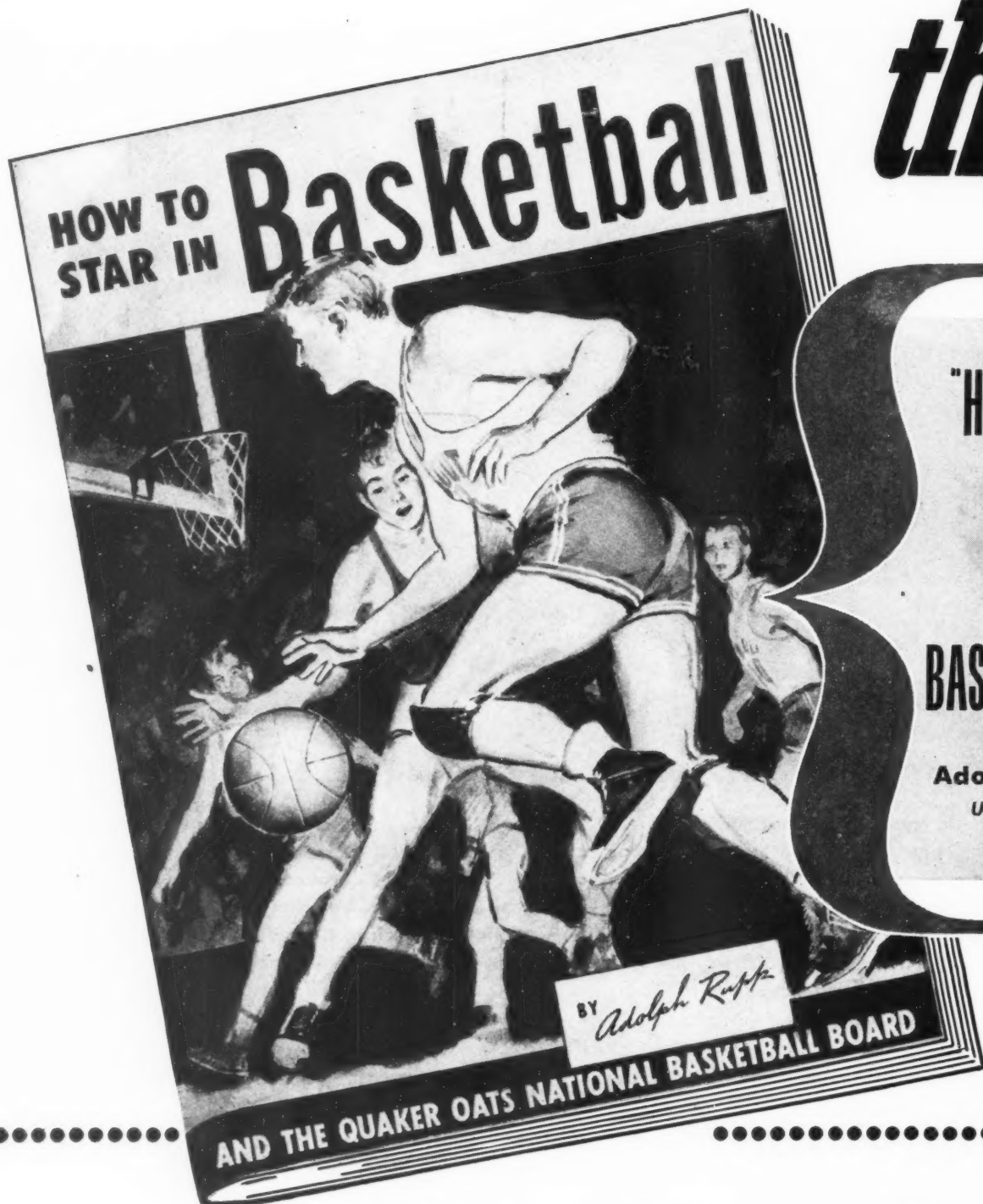
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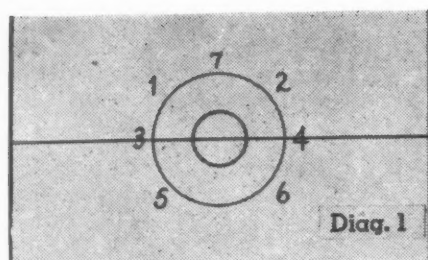
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Tip-Off Revival

By BUS BURGOYNE

Leon E. (Bus) Burgoyne coaches at St. Joseph (Mich.) High School, state Class B champions of 1947-48.

THE rule change this year which brings a held ball into one of the three restraining circles for the jump, is going to have a lot of coaches digging into forgotten notebooks for their old tip-off plays.

True, most coaches have been using some sort of jump-ball play. But, in the past, the direction of the play was more or less obvious, being determined by the proximity to the sideline. This year there will be complete freedom of movement on either side, and the defense will have to keep alert to catch the direction of the play.

It is quite reasonable to assume, therefore, that basketball is going to see a lot more of set plays evolving from jump balls.

The smart coach will not go in for any complicated series of plays. Complexity, especially with high school boys, tends toward confusion. A few simple plays, combined with a thorough schooling on fundamentals, pay much greater dividends.

A simple yet very effective set-up for jump balls is outlined in **Diag. 1**. In this system, the jumper does not tip the ball to a certain player, but to a definite spot on the floor. This eliminates the hesitation and poor timing that occurs when a jumper suddenly discovers his teammates lined up in unorthodox fashion.

All even numbered spots are on the right and the odd numbers on the left, except number 7 which is directly in front. The player involved in the held ball (jumper) calls the play.

This numbering system greatly facilitates the signal. Any number of signal systems may be employed. The two-digit system is simple and quite deceptive, with the first number being meaningless and the second number indicating the direction of the tap.

Thus, in the signal 82, the 8 has no meaning while the 2 indicates

that the ball will be tipped to the number 2 spot. The next time the ball is to go to this position, the signal 32 might be used, and so on.

When the opponents catch on to the signals, the system may be reversed so that the first number called will indicate the play. When this, too, is caught on to, the jumper may call a number merely as camouflage and connote the play with a simple hand signal.

Diag. 2 outlines the number 1 play. Player 3 tips the ball to 1 and breaks around him. Player 1 passes to 2 breaking down the floor, and the receiver dribbles to the basket, if possible, or passes to 3 coming down the opposite side. Player 5 goes to the foul circle for a possible pass-out, and 4 trails.

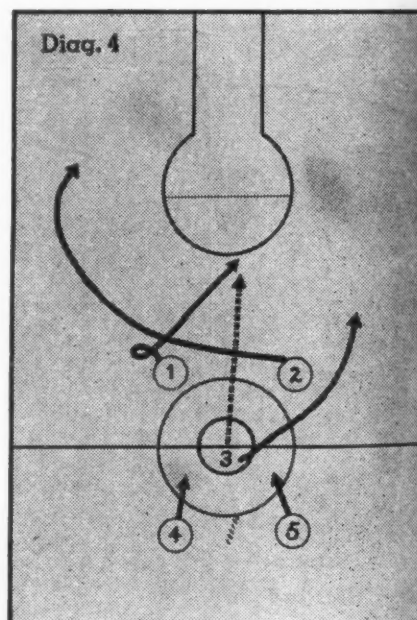
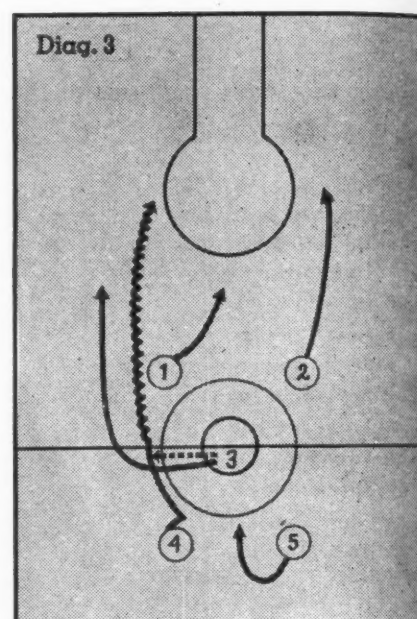
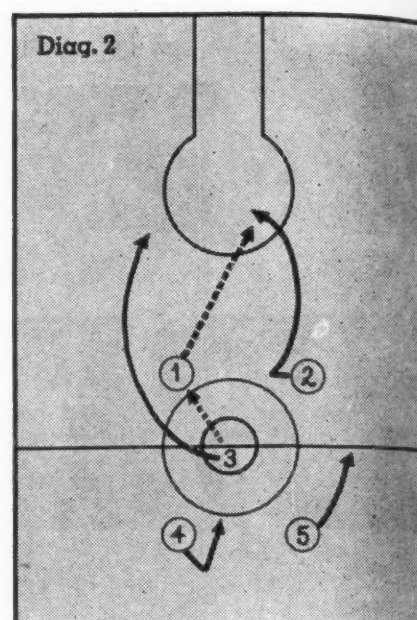
Play number 2 works the same way but on the opposite side.

The guard-around plays, from the number 3 and 4 positions, are particularly powerful. As a rule, when the boys line up in their normal positions for a toss-up, they leave the 3 and 4 spots open.

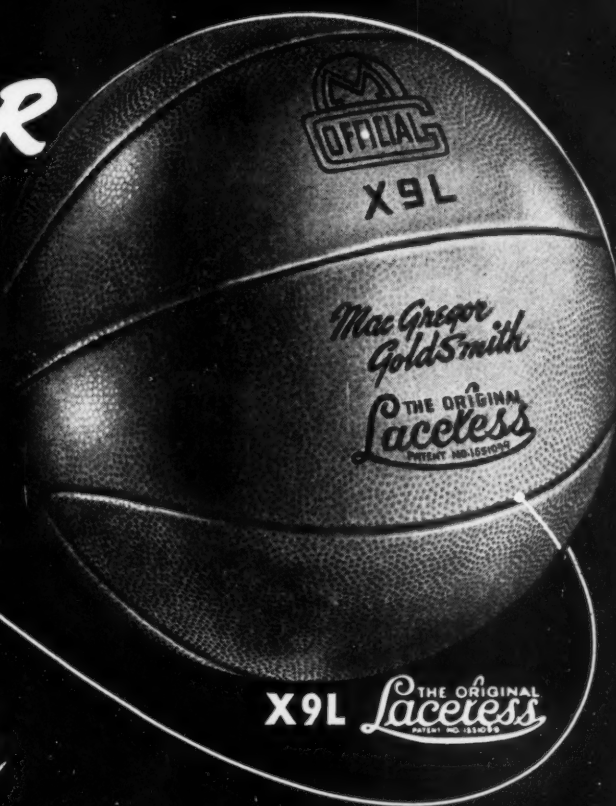
Diag. 3 shows how the number 3 play can exploit this fact. Player 4 fakes to the right and breaks to the left. He receives the tip at the number 3 spot and dribbles in fast, brushing his man off on 1. With a fast start, 4 can often break into the clear and dribble in for a lay-up. Player 3 cuts around 1, while 2 goes down the opposite side and 5 trails.

When the jumper has a definite advantage over his opponent, the number 7 play (**Diag. 4**) is often used. A hand signal indicates whether 1 screens for 2 or vice versa.

(Concluded on page 26)



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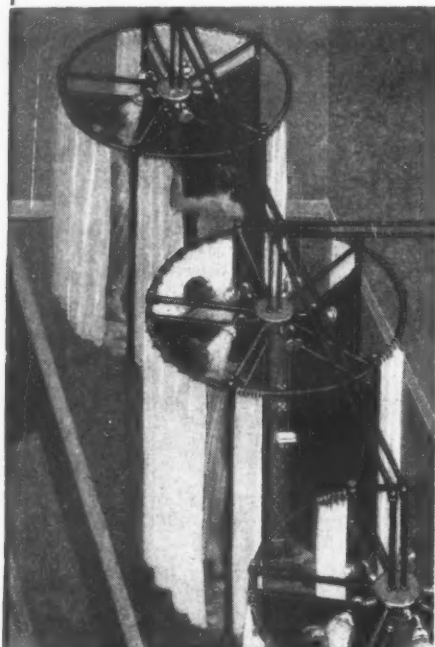
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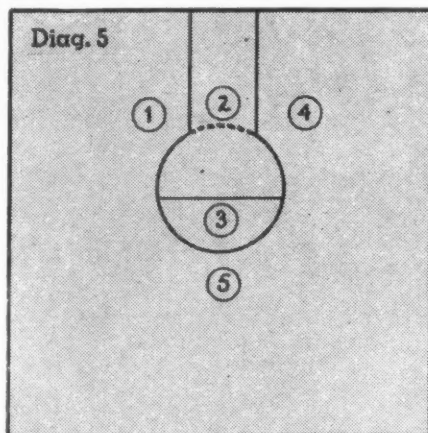
BRADLEY
multi-stall showers

Player 3 tips the ball directly ahead several feet down court, as 2 screens for 1. Player 2 continues out toward the sideline, then cuts toward the basket. Meanwhile, 1 pivots, loses his man on 2, receives the ball, and dribbles in for a lay-up. Player 3 breaks around to the right, while 4 and 5 trail.

A switch from the normal line-up for a jump is often expedient when the toss occurs in the foul circle. The offensive line-up in **Diag. 5** will prove exceedingly effective whenever you find yourself in control of the tip in your own foul circle.

Player 2 lines up at the circle directly in front of 3, while 5 sets up directly behind 3. Players 1 and 4 deploy on a line with 2.

Ordinarily, the defense will place a man between 1 and 2 and another between 2 and 4. If the remaining defensive player stations himself to the right of 1, player 4's left side will be open and the ball can be



tipped there. If 4's left side is covered, his right side should be open.

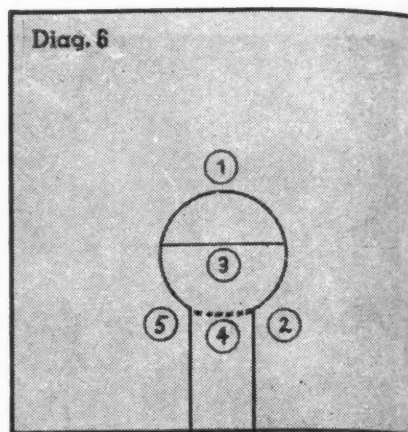
The man covering 5 must play either to his right or to his left, enabling 5 to break to the open side for the tip.

Several options are possible with this offensive formation. Upon receiving the tap, 1, 2, or 4 may execute a quick pivot and dribble in for a lay-up, or pass back to 3 or 5 for a set shot. Or 5 may drive past 3 and take the tip for an easy one-handed push shot, with all five men following up.

Sometimes, of course, the shoe may be on the other foot. The ball may be tossed up in the opponents' foul circle with the opponents controlling the tip.

The set-up in **Diag. 6** offers a defensive solution. Players 2, 4, and 5 form a straight line behind 3, as shown, while 1 toes the line directly in front of 3.

If the opponents place a man between 2 and 4 and another between 4 and 5, as they normally will do, they will be covered by the three



defensive men. Should the ball go elsewhere, these three men can fan out to meet anybody coming in with the ball from any direction.

This defensive set-up in the opponents' foul circle also puts at least three men in advantageous position for rebound play.

"Here Below"

(Continued from page 5)

Clara, Arkansas, Kansas State, Georgia Tech, Butler, Rice, Western Kentucky, Duquesne, North Carolina State, Seton Hall, and Xavier.

"How come you missed Kentucky?" we asked facetiously, humming *Bye, Bye, Blackbird*. Fearless Fosdick grinned, "That's the big one that got away."

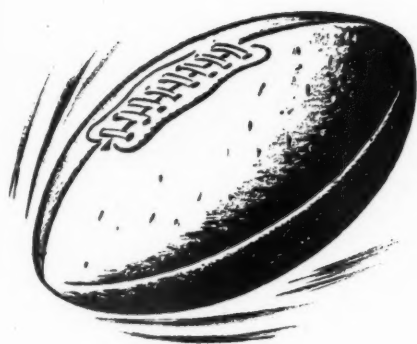
The L.I.U. generalissimo is pretty well fortified for this suicidal schedule. He has eight returning veterans, including a half dozen Frankenstein's over 6-3, plus an ex-school-boy wonder from Englewood, N. J.—6-foot 5-inch Sherman White.

Having heard that Sherman is the closest thing to Dick Merriwell ever developed south of Yale, we asked Clair about him.

"Well," quoth the Raven, "he's the only freshman I ever saw who could dunk a ball with either hand." Realizing he had committed the cardinal sin of coaching—being optimistic—Clair made a quick recovery, "Of course, he's still green and has a lot to learn, etc., etc."

Although Bee has a healthy respect for western basketball, he still believes that the richest talent extant may be found within a 25-mile radius of Times Square, New York City. That includes the five boroughs of New York, a piece of the Atlantic Ocean, and a nice stretch of Jersey swamp.

When we pointed out that the western teams coming into New York win nearly 50% of the games, Bee snapped: "Why not? We see only the very best of the outside clubs."



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Gymnasium Lighting

By C. J. ALLEN and R. E. HOLMES

JUST what do we mean by a "modern gymnasium?" It might be defined as one which fulfills two principal requirements.

First, it offers a pleasing and stimulating environment, which invites its use. Second, it provides facilities adequate enough to make the games and other activities enjoyable for the players and for any spectators.

Good lighting is an important factor in fulfilling both of these requirements. The Illuminating Engineering Society's Committee on Sports and Recreational Area Lighting recommends the following maintained lighting levels for high school gymnasiums:

- 30 Ft-c Exhibition and matches
- 20 Ft-c General Exercising
- 10 Ft-c Assemblies
- 5 Ft-c Dances

For college games, the Committee recommends 50 footcandles maintained in service. This level enables large crowds to see fast play clearly, and permits the taking of motion pictures for analysis of playing techniques. Some college gyms are already wired to provide for double this recommended illumination.

A questionnaire on gym facilities and activities was sent to high school administrators who visited the Lighting Institute at Nela Park during the past two years. The 102 replies came from ten states, and from communities covering a wide and representative range of population. The findings:

1. All the gyms are used for general physical education, basketball, and school dances. In addition, 95% are used for volleyball, 70% for badminton, 50% for indoor baseball, and 25% for tennis.

2. In three-fourths of the gyms, the school officials or coaches consider the lighting fair or poor.

3. The one-quarter, in which the lighting is considered good, average 2.3 watts per square foot. Under typical conditions this wattage represents approximately 20 footcandles average in service.

4. One gym with 4.3 watts per square foot, corresponding to approximately 35 footcandles in service, is rated as "very good." This is the only one capable of providing the 30 footcandles recommended for high school games with spectators.

5. The hours of lighting-use range from 100 to 2400 hours per year, with an average of 750. The hours of lighting-use for games with spectators range from 25 to 500 per year, with an average of 125 hours.

6. In 55% of the gyms, the combination of energy rates and hours of lighting-use indicates the fluorescent lighting would cost less overall than filament.

7. The average size of the gyms in the survey is 82 feet by 56 feet, with a 21-foot ceiling.

8. The average size considered "ideal" by those replying is 98 feet by 72 feet, with a 23-foot ceiling.

In regard to dimensions, the authors conclude from consultations with school officials and architects that a floor 96 feet by 76 feet has much in its favor. It will accommodate a regulation high school basketball court, 84 feet by 50 feet, with proper clearances all around and with seating capacity for 500 spectators in folding bleachers on one side. It will also permit effective use of the floor for a variety of other sports.

Hence these dimensions have been used as the basic gym size in the lighting layouts that will be presented later on. Most larger gyms employ the additional floor area principally for greater seating capacity.

Basketball play requires fast seeing. It is a game in which speed of vision is a factor both in safety of the players and in caliber of play.

Basketball might normally be thought of as an "aerial" sport—that is, one in which the ball is usually well above eye level. Actually, it is seldom an aerial sport except when the play is in close proximity to a basket.

In the passing and dribbling area, the ball generally travels below shoulder height. In the set-shot area, the line of vision occasionally goes up to 20 degrees. In the pivot area, where the players look up toward the basket at 20 to 70 degrees or more, particular care is

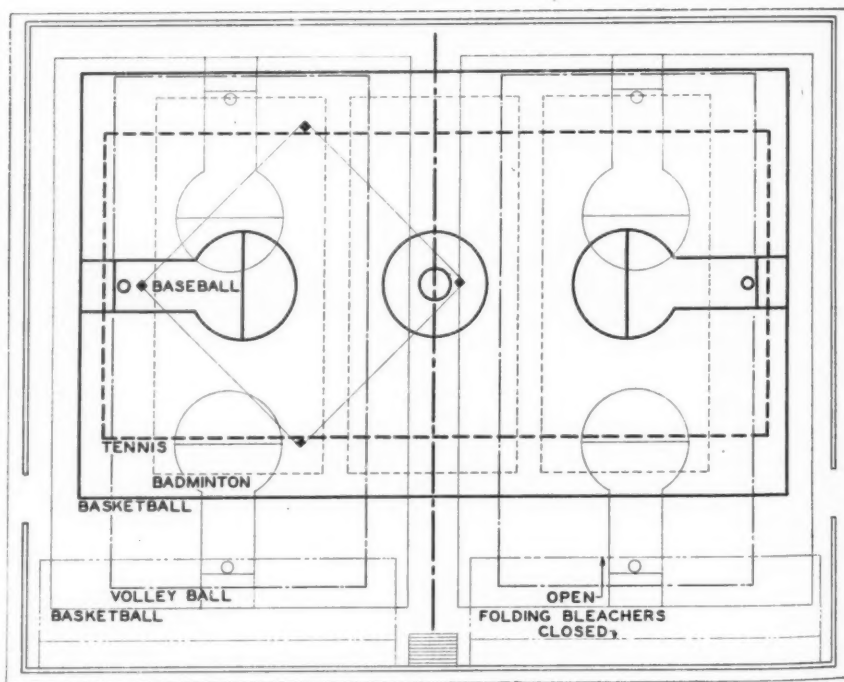
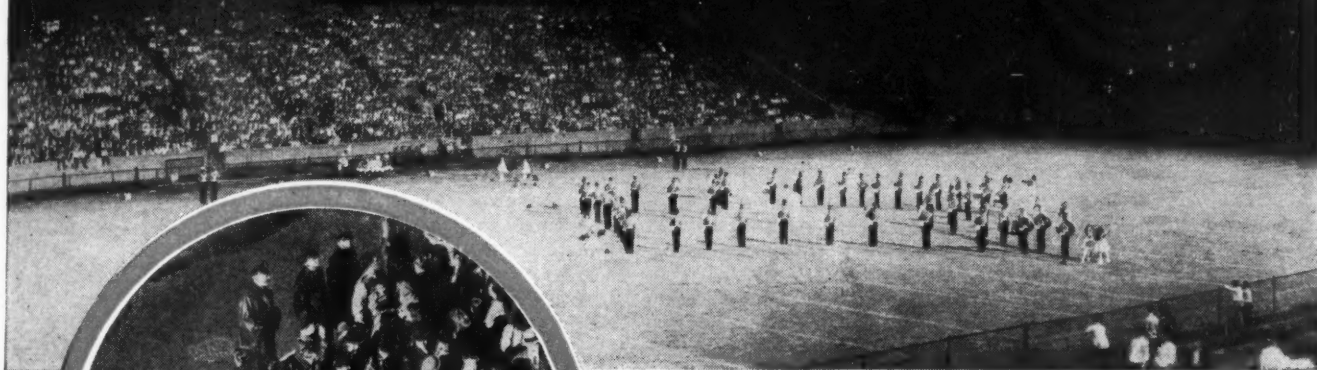


Fig. 1, High School Gymnasium—96 ft. by 76 ft.

1 Standard Basketball Court	84 x 50	2 Volleyball Courts	60 x 30
2 Physical Education Areas	72 x 48	1 Tennis Court	78 x 36
2 Practice Basketball Courts	64 x 42	1 Softball Diamond	27 x 27
3 Badminton Courts, Doubles	44 x 20		

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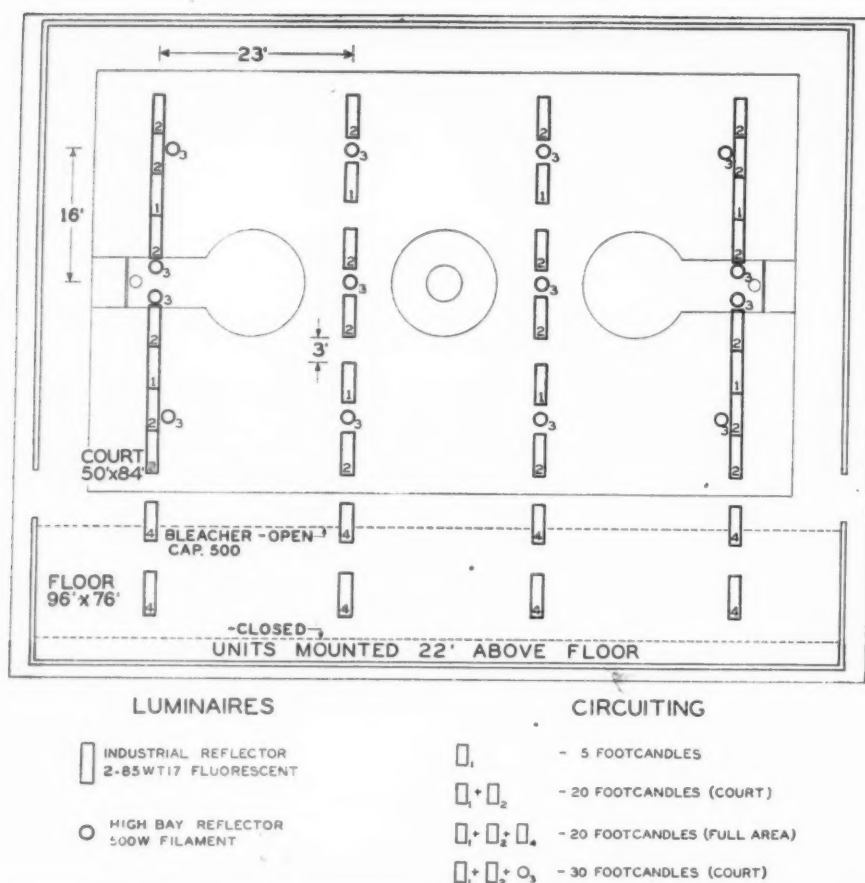


FIG. 2. This suggested fluorescent layout illustrates how a 5, 20, and 30-footcandle level system might be installed in high school gymnasiums whose operating conditions are economically suited to the use of fluorescent lighting.

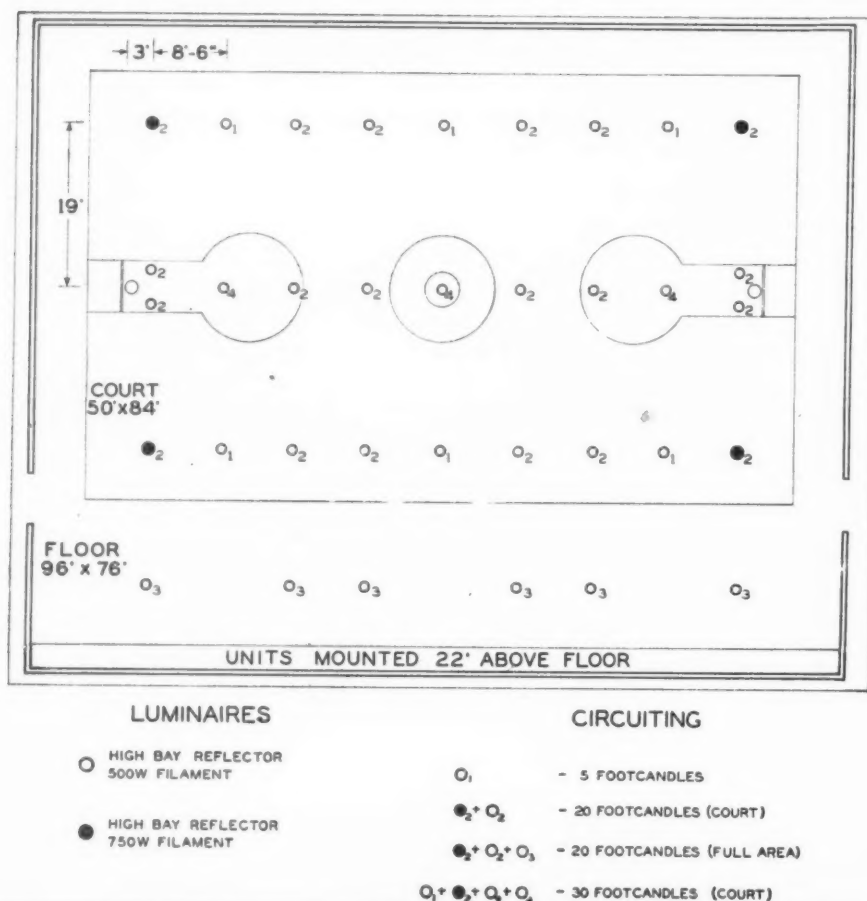


FIG. 3. A filament system will probably prove most economical for high school gyms whose energy rates and operation hours are relatively low. This layout provides 5, 20, and 30-footcandle levels for dances, exhibitions, and general use.

needed in positioning and aiming the light sources to minimize glare.

Visibility readings of a basketball were taken with a Luckiesh-Moss Visibility Meter in two well-lighted gyms having fluorescent and filament installations. With the ball on and near the floor, the readings of relative visibility were very similar in the two gyms, ranging from 9 to 11. There was no significant difference in the measurements from the playing floor and from the stands.

Near the baskets, with the ball held stationary in the air 11 feet above the floor, the results were quite different. Values of relative visibility were 15 under the fluorescent lighting and, employing a special filter on the Visibility Meter, 160 under the filament lighting.

This difference in values does not have direct numerical significance because the normal scale limit of calibration of the Visibility Meter is 20. Nevertheless, all observers concurred that the ball had far higher visibility under the filament lighting, as the readings attested.

The filament installation included two 500-watt high bay units located approximately 12 feet above and 3 feet in front of the basket. These put a high level of illumination in the region of the basket and backboard. In addition, they set up gradations of brightness on the ball which modelled it very clearly.

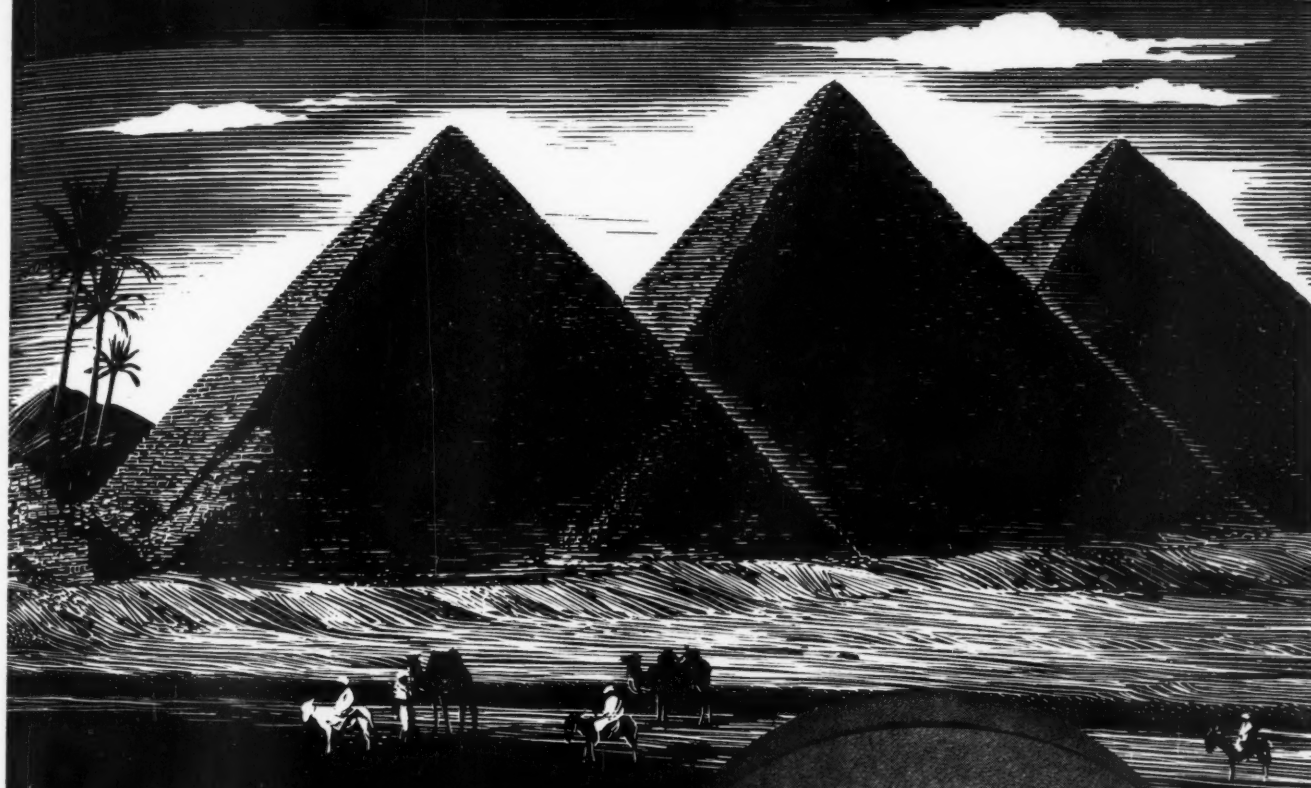
The fluorescent installation, on the other hand, comprised rows of units lengthwise of the gym with the baskets midway between rows. This layout did not build up the illumination level in the region of the basket and did not model the ball distinctly.

The ball was found to have maximum visibility when it was silhouetted against the brightness of a luminaire. When its silhouette was just tangent to a luminaire, on the other hand, the ball was hard to see. These variations in visibility were less pronounced in the case of fluorescent installations because of the lower brightness of the luminaires.

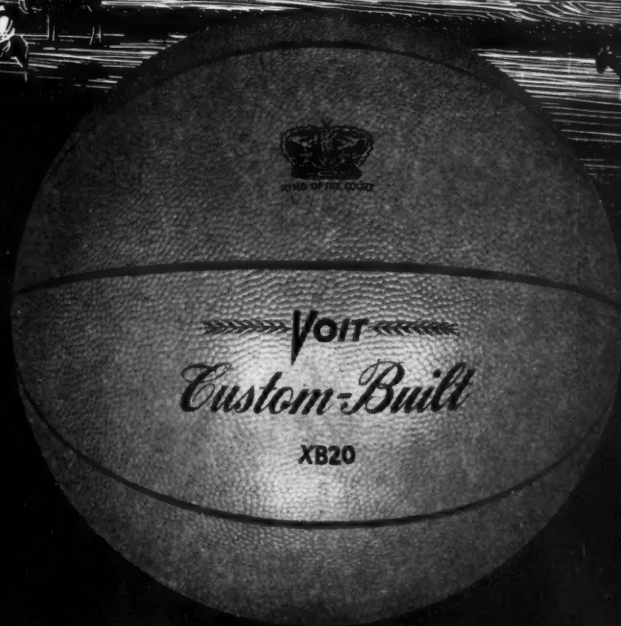
It was found that a light finish on ceilings, wall, and floor materially improves the visibility of the ball in contrast with its background, in addition to increasing the average illumination in the gymnasium. A light-finish ceiling is particularly helpful in making the ball more visible when it is in the critical locations where its silhouette is tangent to a luminaire.

The conclusion from these visibility studies is that fluorescent lighting may properly be used in gymnasiums where an overall cost

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Fast, accurate ball handling is assured with CINCH, the new liquid hand preparation for a non-slip grip. Stainless and sanitary, CINCH dries to a perfect adhesive quality . . . prevents slipping from perspiring hands or a poor grip. CINCH gives you controlled dribbling, quick, sure passing and more shots sunk in that basket. Make this a sharp, high-scoring season with CINCH. Team price for professional size tube is \$7.80 a dozen.

**Cinch Improves
Your Game**



CHEM PRODUCTS, INC.
HARTFORD • CONNECTICUT

advantage is gained or where the neater appearance of fluorescent equipment is desired, provided it is augmented with filament lighting in the pivot-shot area.

This supplementary lighting is well provided by two high bay filament units placed 20 to 22 feet above the floor, approximately 3 feet in front of the basket and approximately 4 feet apart, and aimed directly downward. This position minimizes the occasions on which the units are close to the line of vision of the players.

Badminton is strictly an aerial sport. The visual task of following the small, fast-moving shuttlecock is severe. Its light color can, at times, have a brightness similar to that of its background, with attendant low visibility. And if its line of flight passes in front of a luminaire, the player may lose sight of it and miss the ensuing shot.

It may be concluded that ideal playing conditions are obtained when the bird itself is well lighted, its background is relatively low in brightness and luminaires are removed from the players' normal lines of sight insofar as is practical.

Many forms of special lighting systems have been devised for badminton. But it is beyond the scope of this paper to appraise them, since they are largely portable facilities which are not part of the permanent equipment of the gym.

It may be pointed out, however, that it is possible to obtain fairly good illumination for two or three badminton courts from the regular gym lighting system. To assure this result, the layouts of luminaires and badminton courts must be properly coordinated, as in the designs shown later.

Badminton is often played where the bird is seen against light colored ceilings and walls, as recommended for gyms. For such play the feathers can be treated with fluorescent liquids in brilliant colors such as fire orange and neon red. This will aid contrast and help maintain high visibility.

Since the survey indicates that all high school gyms are used for dances, special provisions for appropriate lighting effects are warranted. A desirable atmosphere for dances is created by a low level of illumination—of the order of five footcandles—of a color flattering to skin tones.

With fluorescent lighting, the "soft white" lamps serve this purpose. With filament lighting, the reflectors may be equipped with theatrical gelatin filters in a wide assortment of tints, and also in deeper colors for spectacular effects.

Likewise, deeper colors may be obtained with fluorescent lighting by colored gelatin or cellophane sleeves.

Portable spotlights with color roundels, and portable fluorescent-lamp trough reflector units with an assortment of colored lamps, will enable dance committees to create distinctively interesting and original color effects.

Light-finish ceilings, wall, and floors enhance the appearance of a gymnasium, besides increasing the illumination level and improving visibility as already pointed out.

Ceiling reflectances of 80 to 85% are attainable on smooth surfaces with good grades of white non-glossy paint. The same paints on acoustical materials have somewhat lower reflectances because of the porous nature of these surfaces. Perforated-type tile permits the maintenance of both good reflectance and sound-absorbing qualities when repainted, as the perforations tend to clog with paint relatively little.

Walls of matte-glazed tile or other non-abrasive material are widely used in modern gyms up to a height of approximately 7 feet. Above this area, light-colored cinder blocks, brick, or wood paneling provide a wall reflectance in the desirable range of 50 to 60%.

Natural hardwood floors, sealed with a non-glossy finish, have reflectances of 15 to 30%.

FURRED CEILINGS

Over one-fourth of the gymnasiums in the survey had furred ceilings. This construction offers advantages of a neat ceiling appearance and usually easy access to the lighting equipment. Either filament or fluorescent luminaires may be mounted above ports in a furred ceiling, and lifted or tilted up for relamping and cleaning. The ports may be protected by wire mesh or by rigid louver assemblies.

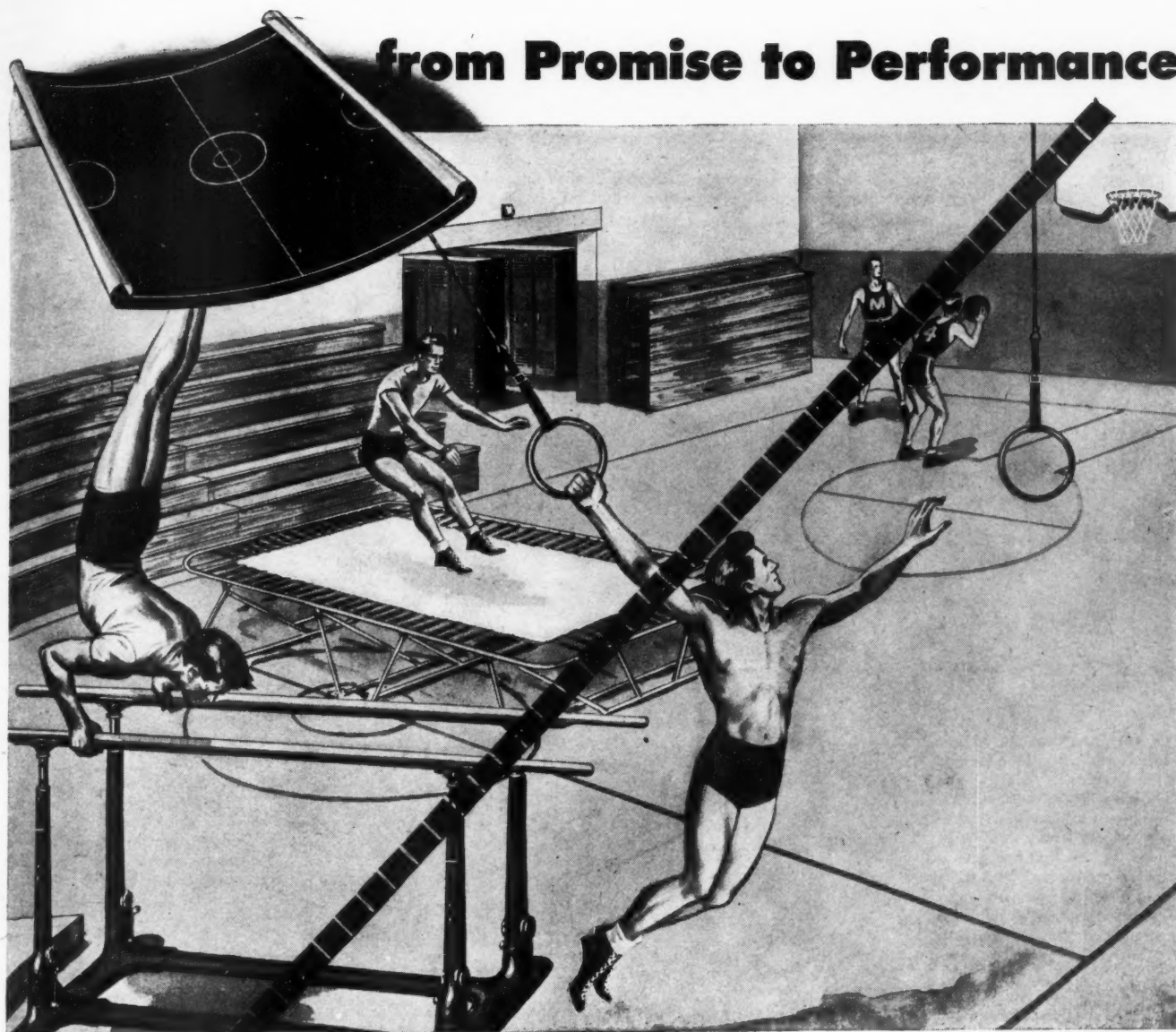
With open-ceiling construction, luminaires suspended 20 to 25 feet above the floor may be serviced effectively from portable lightweight platforms. There are several designs which telescope or fold readily into compact form when not in use.

For mountings above 25 feet there are larger designs of portable platforms; or disconnecting hangers may be used to permit lowering either filament or fluorescent luminaires to the floor for maintenance.

Dirt on luminaires, ceiling walls, and floor may reduce substantially the level of illumination obtained

(Concluded on page 56)

from Promise to Performance



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WHETHER you're planning to install new Gymnasium Apparatus... Steel Lockers... Gym Seats, or all three, you'll want the advantages of Medart consultation and planning *first*. Because it's that first step... relating plans to needs, based on budget limitations, that prepares the way for proper installation... with none of the headaches of changed plans due to unforeseen problems... of unreckoned expenses that necessitate disheartening concessions from original plans. It may often mean the difference between a complete program and a compromise, partial one! It costs no more and results are sure... if you let Medart *put it on paper first!*

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Basketball Backstops
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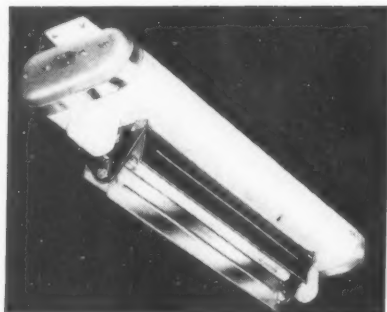
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ST. LOUIS 18, MO.

LEADERS FOR OVER 75 YEARS IN THE MANUFACTURE OF SCHOOL EQUIPMENT

NEW EQUIPMENT

As a service to its readers, Scholastic Coach offers this periodic round-up of new sports equipment items. For further information write to: Scholastic Coach, New Equipment Dept., 7 East 12 St., New York 3, N. Y.



• **GERMICIDAL LAMP** (left). The Hanover Chemical & Mfg. Co.'s Letheray lamp is designed for ceilings and walls and can be set to direct or baffle the germicidal rays as desired, thus controlling the intensity of ultraviolet.

• **LIQUID GRIP** (right). A hand preparation, produced by Chem Products, which dries instantly to a perfect adhesive quality, preventing slipping from perspiring hands or a poor grip. Sanitary and stainless, perfect for all sports.



• **COACH SLACKS**. Made of best materials available, John J. Fox's California Coach Slacks are 100% pure virgin wool, custom tailored to individual measurements. Possess heavy doubly reinforced pockets that are deeper and wider than usual, heel stays that protect cuffs from wear, and belt loops that really hold. So smartly styled, they can be worn for dress.

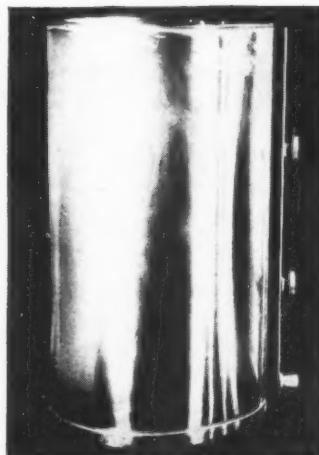


• **FOULMARKER**. Invented by Louis Nicoletto, the Cosby (football foul) Marker consists of a central flexible staff with red and white flag attached to top and a central weight at base. When marker is dropped, base spreads out and flag is visible about 9 in. above ground.

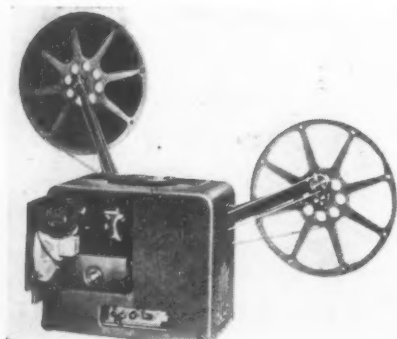
• **TAMPATCH**, a United Labs. product, is ideal for high-speed repair of concrete floors. Floor may be put in service almost immediately after repairs have been made. Possesses exceptional ability to withstand heavy traffic loads. Delivered in complete ready-mixed form.

TAMPATCH

UNITED LABS., Inc.

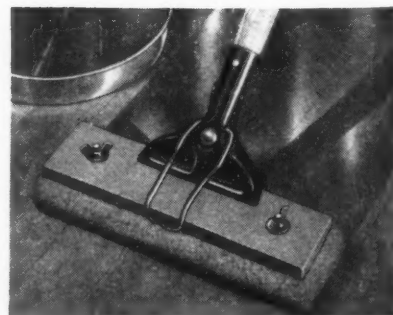


• **HYDROTHERAPY BATH**. A cylinder of stainless steel 16 in. in diameter, 30-in. tall, weighing about 20 lbs., this Purity Mfg. Co. device provides the simplest, fastest, most economical way of treating small leg and thigh injuries. Furnishes rapid circulation of hot or cold water, with water level controlled by outside valves. All drain water is removed by outlet near bottom.



• **SINGLE-CASE FILMSOUND** (left). Bell & Howell's sound projector is lightweight and designed with a 6-in. speaker mounted on a removable door, and a 10-watt amplifier. Speaker and projector are connected by a 40-ft. cable. Incorporates silent and sound speeds, reverse, still-picture clutch.

• **NON-SLIP FLOOR POLISH** (right). A product of synthetic resins containing no wax, Safe-T-San reduces slipperiness of any flooring material; dries bright in a few minutes and produces a beautiful floor finish. Economical, facilitates maintenance. Produced by Huntington Labs.



IN THE POSTER
ON THE
FOLLOWING PAGES

RULE NO. 1 in Sports and Daily Living

from ADOLPH RUPP

Kentucky U. and Olympic Basketball Coach

In his 25 years of high school and college coaching, Adolph Rupp has conditioned thousands of athletes for the fastest foot game in sports. A master technician and a master conditioner, he knows that one can't go without the other. So when he advises boys and girls to avoid alcoholic beverages, his words command the deepest respect. The menace of alcohol is indisputable. It is an acute depressant, not a stimulant, and is a destroyer of both organic efficiency and the mental processes. Coach Rupp's message appears on the next two pages. Place it on your bulletin board where it may be read by every student in your school. It may be easily removed from the magazine by turning back the staples. For additional posters, check the Master Coupon under the "Alcohol Education" listing on page 71.

ALCOHOL EDUCATION



ADOLPH F. RUPP, Coach, Kentucky University, 1948 National Collegiate Champions; and Co-Coach, 1948 U. S. Olympic Basketball Team, World's Champions.



READY

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A MESA

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EDUCATION

GO AVE., EVANSTON, ILLINOIS

Questions and Answers on

alcohol

Is Alcohol a Stimulant?

NO. It is a narcotic, and as such it suppresses or lessens the activity of living matter. By lessening the caution it gives a temporary sense of well-being. But over a period of time it acts as a depressant to both mind and body.

Does Alcohol Increase Endurance?

NO. Alcohol saps energy and greatly increases fatigue. The reason for this is that alcohol slows down the removal of lactic acid (the acid formed by sugar in the body every time we exercise) and unless this acid is quickly removed the muscles soon tire.

Is Alcohol Good For the Nerves?

NO. Alcohol seriously upsets the nervous system. It disturbs the protective lipoids and dehydrates some of the moisture in the body which is so essential to proper functioning of the nerves.

Does Alcohol Improve Judgment?

NO. One of the most serious effects of alcohol is on the cortex of the large brain, or cerebrum, which directs our thoughts and actions. It interferes with the "messages" which are received from the sensory nerves and also reduces normal "inhibition" or caution.

Does Alcohol Aid Coordination?

NO. It interferes with both voluntary and reflex movements of the body, and completely upsets that "teamwork" between mind and muscle called coordination.

OR
RS

SCORE

VISITORS

TOP NOTCH

50

WHITE FLASH

WOMENS
LITEGRIP

GRIPSURE

GRIDSHU

COLLEGIATE

- ★ Snugfit Arch Cushion
- ★ Sponge Heel Cushion
- ★ Loose Lined
- ★ Ventilating Eyelets
- ★ Correct Fit
- ★ High Peg Top
- ★ Traction Outsole





Hughes Photo

The Fallacy of ESCOPETAZOPHOBIA

By E. B. MANN

TAKE *escopetazo*, from the Spanish, meaning "gunshot wounds"; add *phobia*, from the Greek, meaning "fear"—and you have *escopetazophobia*, meaning "fear of gunshot wounds; a disease common to seven out of ten adults (including all mothers); a disease of the mind, based on ignorance and misinformation, having little foundation in fact."

More misinformation on guns exists than on any other subject of human interest except sex. And no subject, again possibly with the same exception, has a greater or more universal appeal to boys, especially to *puer americanus*.

American boys love guns as ducklings love water, and just as naturally. Guns are an inseparable part of the American saga, and that saga is relived on every playground and every back lot in the land, by each succeeding generation.

Your generation (and mine) relived it with the "Bang! You're dead!" of cowboys-and-Indians and cops-and-robbers. Your son relives it daily with the "ta-ta-ta-ta-ta" of the machine-gun age.

And mothers shudder!

Why?

Because boys are killed by guns?

True. But bathtubs kill more Americans than bullets.

Stepladders and rugs kill more Americans than are killed with guns.

More boys (and girls, and men, and women) are killed by automobiles *every week* than are killed by "firearms accidents" in a decade! Not even the guns of war, small guns and large, have ever cost as many American lives in any one year as does the family car, year after year!

The Travelers Insurance Com-

pany offers the following table of "accidents resulting from causes to which all men are exposed without regard to their employment":

Accidents at home (inside) . . .	25.79%
Accidents at home (outside) . . .	18.56%
Accidents to pedestrians	17.32%
Accidents while engaged in sports and recreations	17.05%
Automobile accidents	12.28%
Travel accidents (other than automobile travel)	3.52%
Miscellaneous accidents	5.48%
	100.00%

The same authority breaks down Item 4 above ("Accidents while engaged in sports and recreations") as follows, in figures showing the number of accidents:

In country or woods (exclusive of activities specified below) . . .	361
Horseback riding	270
Baseball	256
Football	248
Bicycling	246
Winter Sports	219
Bathing and swimming	202
Golf	178
Basketball	157
Other athletic games	140
HUNTING	140
Other classifications (boating, canoeing, bowling, tennis, squash, skating, scuffling and wrestling, fishing, at theaters, churches, concerts, at parks, picnics, outings, at dancing, billiards and pool, boxing, etc.)	1,103
	3,520

Hunting—with guns—was responsible, according to these figures, for less than 0.68%—a shade over two-thirds of one percent—of the acci-

dent claims for "sports and recreations!"

By these figures, golf is more deadly than guns. The bicycle is nearly twice as dangerous, while the automobile is nearly twenty times as dangerous as the shotgun, rifle, and handgun combined.

So much for statistics. But the statistics include *all casualties*—the avoidable as well as the unavoidable; whereas true accidents are "mishaps which could not have been avoided with reasonable care." And, by that definition, it can almost be said that *there is no such thing* as a "firearms accident!" Nine thousand nine hundred and ninety-nine out of every ten thousand so-called "firearms accidents" are not accidents at all, but are the product of rank ignorance, criminal carelessness—or both!

A seemingly perfect tire which blows out, an apparently sound ladder which breaks, a cornice which falls off a building onto a passing pedestrian—these are accidents.

In the shooting game, such things are practically unknown. "Failure or malfunction of gun or ammunition" is so rare that it is not even listed on the forms issued by the various state game commissions for reporting accidents in the hunting field. And even where such failures or malfunctions do occur, in ninety-nine cases out of a hundred they, too, are the result of gross neglect, carelessness, or ignorance which has allowed a thoroughly dependable mechanism to become weakened or to be overloaded.

The often-heard inanity, "The unloaded gun is the one that kills," is a lie. The unloaded gun is no more dangerous than any other "blunt weapon."

"He didn't know it was loaded"



Made of finest grade leather; easy gripping surface; durable; will retain shape despite the most rigorous and lengthy usage.



Championship shoe features a strong, supple leather top and a molded rubber sole—perfect for quick stopping and starting.

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Simple, economical. One pound makes a gallon.

Kills all different species of common Athlete's Foot fungi and their tough spores.

SPEEDY—Kills in less than 60 seconds.

Non-irritating to the skin. Does not damage towels.

Stable in solution. Can be quickly checked by inexpensive Alta-Co Tester.

A tried and proved fungicide. Get the evidence—verbatim reports by medical authorities.

Write today for our 36-page illustrated booklet "ATHLETE'S FOOT—A Public Health Problem."

Alta-Co Powder Provides TESTED SCIENTIFIC CONTROL

Alta-Co. POWDER

The C. H. DOLGE CO. Westport, Connecticut

is the real killer—and only complete ignorance of the proper handling of firearms, or criminal carelessness in their handling—or both—could even conceivably explain the handling of a firearm without *knowing* whether it was loaded or not.

The first rule taught by anyone who knows firearms to any novice is, "Look *first* to see if it is loaded. Then look again. Then work the action—to eject any cartridge you may not have seen! Then leave the action open, so the gun can't shoot until you're ready to shoot it."

Do that, and you'll never need to say, "I didn't know it was loaded!"

The second rule is, "Never point a gun, or allow it to be pointed, at or even in the direction of yourself or any other person unless the intention is to kill."

Observance of these two simple rules would end 99% of all "firearms accidents" in this or any other country.

A third rule—"See at least one horn, at least three legs, or at least one wing *before you shoot*"—would prevent nine out of ten of that remaining one percent!

Yet fear of guns is accepted as a normal part of the "maternal instinct" in ninety-nine out of every one hundred American homes. (Not even fathers are immune to it!) And that fear is far more deadly than the guns themselves; deadly because, in all too many cases, it prevents American boys (and girls) from learning to handle and use guns *safely*.

It does *not* prevent those boys and girls from handling guns. On the contrary! It merely leaves those boys and girls in ignorance—which means that they are then, truly, potential killers when guns do come within reach of their eager fingers.

That fear is deadly, too, in that it paves the way for legislation against the ownership of guns by private citizens; and such legislation can (and will, unless prevented) disarm America and leave her an easy prey, as were the disarmed countries of Europe, to any aggressor, within or without.

You teach your boys and girls to swim because the ability to swim may save their lives or the lives of others. (Swimming is more dangerous than gunning; and the knowledge of how guns should be handled might save their lives or the lives of others, too.)

You teach your boys and girls to ride, because riding is good exercise and a social accomplishment. (Riding is more dangerous than shooting.)

You teach your boys and girls to cycle because, among other things, the bicycle will enable them to run your errands more quickly. (Cycling is more dangerous than shooting.)

You laugh at your children's fear of storms . . . yet storms kill more people in America in one year than are killed by even so-called "gun accidents" in ten.

Guns—like swimming pools and horses and bicycles and storms—are just another factor in the lives your kids will lead. Why not be consistent? Why not teach them to deal with guns as you teach them to deal with those other factors?

Fear of guns in the hearts of American mothers did more to delay and complicate America's war efforts in World War I and again in World War II than enemy saboteurs could do. America boasts (in war time) that she is "a nation of riflemen"; yet less than 2%—less than two out of every hundred—of the men drafted for military service in World War II knew, before they were inducted, how to shoot a rifle!

That failure prolonged the time needed for training; made it impossible for us to attain, in the allotted time, the skill that would have been possible had American boys generally been taught to shoot for sport before they needed to shoot for war.

TRAINING TOOK WEEKS

American soldiers were fair riflemen, once they were trained. But the training took precious weeks of time; weeks of work (while other American boys on Guam and Wake and Guadalcanal died, or cursed and prayed for re-enforcement) to teach them what they would have learned eagerly and well except for parental "thou shalt not's."

And some, due to the exigencies of war, never learned. Americans were sent into the trenches in World War I, and shown how to load their previously unfired rifles after they had entered the battle zone!

It was better in World War II—but "Commando" Kelly tells, in his published story, of men who joined his outfit and had to ask (as did their fathers in the previous war) how to load and fire their weapons.

It isn't a pleasant thought, but it is highly probable that there are American boys buried in the far corners of the world today who might still be alive if parental fear of guns had not prevented a little "basic training" with a .22 rifle in the Junior Rifle Club back home.

It isn't difficult to teach children

(Concluded on page 60)



For action like this...

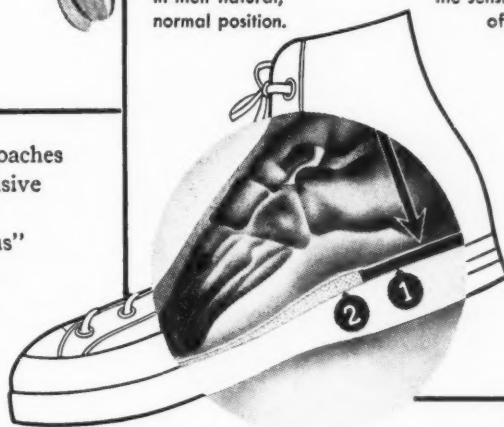
Get your team

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Basketball Shoes!

“**P-F**”* means
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1. This rigid wedge keeps the bones of the foot in their natural, normal position. 2. This sponge rubber cushion protects the sensitive area of the foot.



*Trade Mark

Good basketball starts with good feet! That's why so many coaches specify “P-F” Basketball Shoes! The X-Ray shows how this exclusive feature guards against flat feet and tired leg muscles . . . gives a player more “staying power.” What's more, you get all these “plus” features: Molded tan non-marking positive-grip outsoles—sponge cushion insoles and heels—extra quality army duck loose-lined ventilated uppers—ventilating eyelets. Whether you buy full-team equipment or players buy their own—specify “P-F” Basketball Shoes!



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FREE! 1948 Edition “Basketball Hints” by Coach Ozzie Cowles, University of Michigan 1948 (Big “9” Champions), University of Minnesota 1948-1949. Diagrams, winning plays, training rules . . . help for every player. Ask for a copy for each man on your team. Also **FREE**—Basketball Foul Shooting Record Charts. Write today! Athletic Dept., P. O. Box 327, Watertown 72, Mass.



Hood “Conference”

Specify “P-F” Basketball Shoes made only by B. F. Goodrich and HOOD RUBBER COMPANY

Health Hazards in Sports

By C. O. JACKSON



No community towel or drinking bottle at Allerdyce High School, Pittsburgh, Pa. This practical device affords each boy his own drinking receptacle and towel.

COMPETITION, and athletics especially, are fundamental and vital to the American people, and the steady expansion of our high school and college sports programs is a most encouraging trend.

Where athletics are in proper balance with the other departments of the school, and this is true in most schools, they are probably the finest morale builder and the greatest single unifying force that an educational institution has.

Think for a moment of the number of boys who stay in school merely because of their strong desire to participate in athletics. If one can't play, he may watch and cheer, and the games become a vital part of the school and community program.

The coach, therefore, is in a key position to establish policies and to make athletics truly educational. The responsibility is tremendous.

Unfortunately, the health and welfare of the individual participant has not always been given sufficient attention. While many schools are doing a splendid job of protecting their players from all possible health hazards, too large a number are lax in recognizing and accepting this challenge.

Just think back over the present athletic year, beginning with basketball. Recall some of the violations of good health practices which you have seen in a number of high school contests, perhaps even in your own league. We might make a guess as to some of the things you observed, but, for the sake of accuracy, let's enumerate a few malfeasances which coaches, principals and physicians pointed out in a recent survey.

C. O. Jackson, associate professor of physical education at the University of Illinois, is one of the most respected men in the field, having 23 years experience on the university and graduate level. He has also written innumerable articles and several books on health and physical education. In his next article for *Scholastic Coach*, he will cover health safeguards in sports.

During time-outs, some of the players, tired from their driving, "fire-wagon" game, sat or lay around on a cold, drafty, not-too-clean floor. They shared a common towel, already soiled by previous use and by frequent contact with the court as it was thrown out to them.

While they refreshed themselves and planned a new line of attack or agreed on a different defense, they very likely drank from a common water bottle or sucked from a common lemon or orange.

Spitting on the floor, of course, wasn't even a safety hazard, because the occasional player who failed to expectorate in some easily available corner, carefully removed all traces of the sputum with a swipe of his shoe.

And then remember track meets, where many of the participants either failed to warm-up properly or cool off slowly. Too many of them sat or lay around on the damp ground, waiting for the next event. A few wore uniforms which were decidedly filthy, because they were superstitious enough to believe that somehow or other, the mere washing or laundering of their equipment would destroy the "charm" and interfere with their chances of winning!

While baseball didn't reveal as many questionable practices, a close observer might have noticed several. For instance, the water bucket, open to the skies, and already containing sediment from a dust-laden wind and the clouds thrown up on that slide home; the single dipper used to convey water to the lips of the entire team; and last but not least, the common towel again, to

help each player secure a temporary relief not possible by rubbing soiled uniform sleeves over his hot face. These were all probably seen at some time or other during the season.

Football, with all its pageantry, its crowds, and its excitement, probably furnished as many hazards as all the other sports put together.

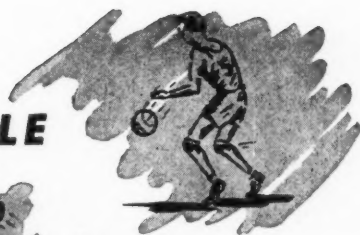
You may not have noticed the boy with the injured shoulder, who had it taped and played most of the game in spite of a physician's warning; the end with the torn ligaments in his taped ankle, who was rapidly developing a chronic condition; the full back with the injured knee, a loose cartilage that occasionally locked; or the two halfbacks, both still adolescent in spite of their size, who were tired and stale and bruised from too much scrimmage.

If you were not too busy scouting or worrying about the outcome of the game, you probably noticed the student managers or the student trainers during time-outs. Sometimes they did nothing but tote the water bucket with the battered dipper and the soft, refreshing sponge; or carry out the two towels, to be used throughout the game as needed, for wiping off the ball, the kicking shoe, and the hot, sticky faces of the players indiscriminately.

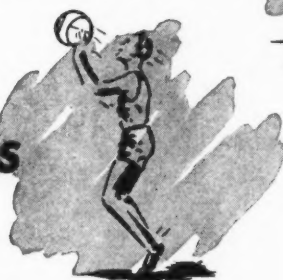
At other times, when the game was halted because of an injury to a player, they may have taken over responsibilities no reputable physician would dare assume without first making a careful examination.

The player who had the "wind knocked out of him" in a pile-up or as the result of a hard, driving

... ON THE DRIBBLE



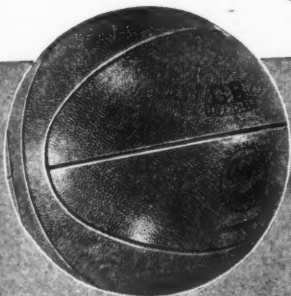
... ON THE LONG SHOTS



HOME	VISITORS
68	13

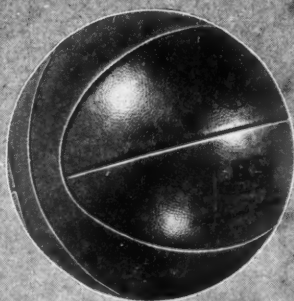
... ON THE FINAL SCORE

MOLDED BALL



The CB molded basketball is completely official and is guaranteed not to peel—to hold its true spherical shape and to give consistent rebound at all times. For exacting performance always specify the Craft Built C.B.

LACELESS BALL



For those who prefer the sewed type ball the H. I. endorsed by Hank Iba of Oklahoma A & M, is tops in quality and performance. Completely official, the H. I., whether used for practice or regular play, is a ball that's hard to beat.

RUBBER BALL



The VB rubber ball that is completely official in every respect—looks like leather, feels like leather. Designed to give exceptional wear on the outdoor court, the tough rubber cover on this ball will not scuff or tear under the hard grind of concrete, gravel, or cinders.



DIVISION

OHIO-KENTUCKY MFG. CO.
ADA, OHIO

IT'S *Performance* THAT *Counts*

Regardless of which kind of ball you choose or what you use it for, in the final analysis, it's the performance that counts. The Craft Built line features a ball for every purpose in varied price ranges ready to meet your most exacting requirements. Get acquainted with this outstanding line today.

tackle as he caught a pass, perhaps was rolled over on his back and had his knees pressed forcibly into his stomach several times. He may then have been pulled to his feet by the student manager and a teammate, to be walked around.

The participant whose cartilage had locked slightly in his knee when he was brought down hard on an end run, may have received both advice and help to force it back.

Stronger ankle wraps may have been quickly added to those already supporting the bad ankle of the end when he began to limp after being blocked out of a play.

While all this may have been going on, the chances are fairly good that one or more of the players, some of them badly winded, were sitting or lying on the cold ground, as they tried desperately to regain both breath and strength.

Lack of condition or playing out of their class and weight, takes its toll. The time-out ends all too soon and weary, bruised bodies, some of them still growing too fast, get up and keep fighting. If there were any substitutions, it is fairly likely that at least one came in before he was properly warmed up, and thus was even more susceptible to early injury.

If you have coached a year or so, you have undoubtedly seen enough of these incidents to know they are fairly common. To veterans of many seasons' experience, the number may run into the thousands.

Sometimes the coach becomes so engrossed in another aspect of the game, perhaps the outcome, that he doesn't notice certain danger signals. As an expert, he may be giving most of his attention to planning further strategy or refinements of already successful plays. It is, of course, possible that some coaches will not recognize the examples cited as health hazards, and therefore, pay no attention to them.

The fact still holds. In too many high school contests, the health and physical welfare of the individual participant is not always given intelligent attention.

Sooner or later a boy may be lost to the squad because an injury is improperly handled or because it becomes infected or chronic through lack of sufficient rest and adequate medical care.

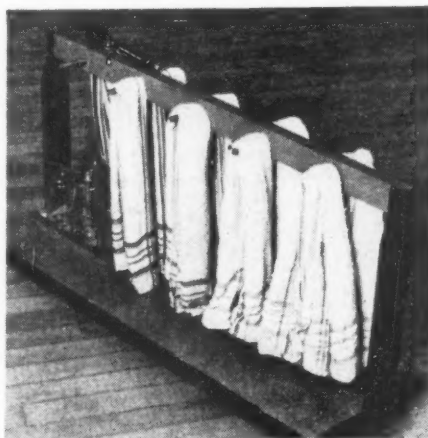
Another player may suffer unnecessary illness or further absence from school and play because he followed wrong health practices or played and practiced when he should have been home in bed.

In extreme cases, the boy may suffer the rest of his life because of negligence. All of the boys who ap-

pear in college with "trick" knees, didn't get them while playing on the freshman varsity. In many cases the first symptoms would have been apparent to a trained physician, and proper medical treatment might have eliminated much of the trouble and pain which followed.

In the sports already discussed and in the hypothetical incidents pictured, the emphasis has been on what happens all too frequently during interscholastic contests. If an observer took the time to visit a practice or two in some of these same sports, it is likely that similar or perhaps even more startling violations might be noticed.

The basketball coach who encourages or even insists that substitutes exchange jerseys during practice, is promoting and teaching a questionable habit. In addition to the unpleasantness associated with putting on a damp, smelly piece of clothing which has already been worn by several perspiring boys, gym itch, impetigo, and similar skin infections are easily spread in this manner.



Individual towel and bottle device used by the Granite City (Ill.) High School quintet. Note the timer's horn on top.

If the laundering of this and other practice equipment is haphazard, then, bacteriologically speaking, the participants are gambling still further with their health.

Officiating during practice sessions is often handled by student managers or ineligible players who lack the necessary competence. Often, the coach handles this chore himself, but since he continues to direct practice, his officiating may be just as inefficient and constitute still another hazard for the player. When a scrimmage, especially in football, continues for an hour with hardly a let-up, most anything can happen, and usually does.

When you can locate the locker room, the varsity team room, or the wrestling room by your sense of

smell, you know that here is a coach and a team which pay little attention to some of the factors affecting health.

That "locker room stench" is caused by only one thing, human sweat, mixed well with dirt and filth, and well-soaked into the equipment hanging or stuffed into the small locker. When the equipment is worn frequently for an entire season without adequate laundering, and parts of it are freely exchanged or "borrowed," then the hazards naturally multiply.

In such situations, you usually find a floor that is seldom adequately cleaned, wash bowls equally dirty and without hot water and soap, and urinals and toilets which stink to high heaven for very obvious reasons. You would naturally expect to find a high incidence of athlete's foot present, just to mention one of the commonplace infections, and the chances are you would not be disappointed.

The environment in which a sport is carried on, quite frequently indicates the standards of health followed.

Have you ever attended wrestling practice in the average high school? What about the smelly sweatclothes worn for weeks at a time, the flannel mat covers, often unchanged for the whole season, and the high incidence of ear and skin infections? The hazards both smell and speak for themselves.

If you inquire further and find that participants are permitted and even encouraged to lose weight in order to play on a lightweight team, or to "make" a lower weight division in wrestling, then you have come face-to-face with one of the greatest hazards of all.

Physicians agree that the average high school boy, once he has lost the little fat he normally carries, can only lose more weight by lowering his resistance and perhaps even weakening other parts of his body. Since most high school boys are still very much in the "growing" stage, any emphasis on dieting for any reason whatever, should have the careful supervision of a competent medical person and his complete approval, before the boy is permitted to go on with it.

What are some of the factors which have tended to bring about a number of the conditions already described? Let us consider what has happened in certain sports during the past ten years.

The modifications and changes in the football rules have definitely made the game safer by opening it up and by permitting freer substitutions. The objective has probably

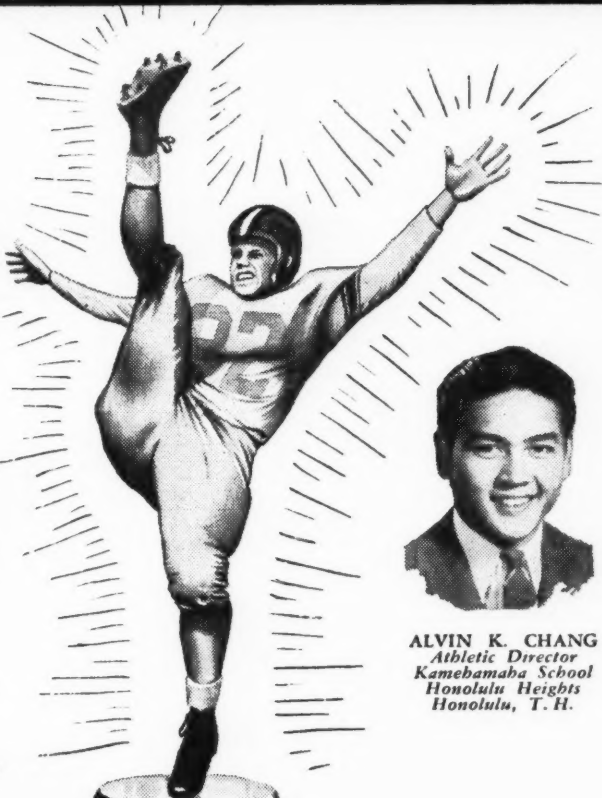
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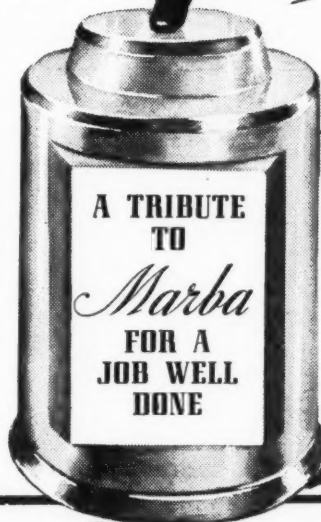
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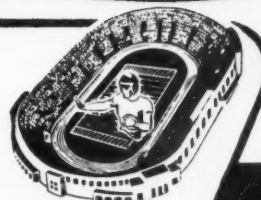
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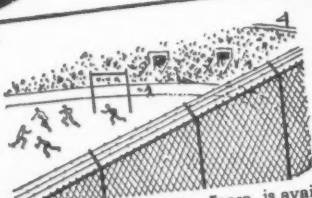
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been reached in most large schools, where lines or whole teams are frequently substituted, but the smaller schools, playing either the eleven or the six-man game are still faced with the problem of finding enough capable players to make frequent changes.

This is further aggravated when, as so often happens, they play out of their class and compete against heavier, more mature, and perhaps better conditioned boys.

In basketball, the result of rule changes, made almost entirely to please and attract spectators, has led to a speed-up of the game to the point where some coaches and parents, particularly many physicians, are frankly worried about the possible dangers to the health of immature growing boys.

"Fire-wagon" play, so common throughout the United States, requires superb conditioning as well as a sufficient number of capable substitutes. Again the larger school is more likely to be less handicapped.

State associations have attempted to eliminate numerous hazards by specifying the number and length of practices before the first scheduled game, and, more recently, the number of contests which may be played between the established opening and closing dates of the season.

These policies are generally recognized as wholesome, educational projects, and also help protect the participants both from themselves and rabid backers.

However, some schools still evade the spirit of certain rulings, by scheduling many practice games for the varsity squad. The writer recalls one midwestern high school which played 92 basketball games in a season, by scheduling numerous "practice" games, sometimes as many as two or three a day during times when school was not in session! After the first few games, the same group of six boys alternated in playing the rest!

Another practice in many small schools, is to play two games an evening by alternating a number of the players from one team to the other. A boy may thus play most of two games in one evening.

Whether we like it or not, most competition on the varsity level, even in high school, appears to be primarily for the spectator who "pays the freight," and the participant too often is cast in the role of the "forgotten man," at least as far as consideration for his immediate or future welfare is concerned.

This can be traced directly to the fact that most sports are either self-

supporting, exclusive of salaries, through gate receipts or even make enough profit to expand other parts of the physical education program. When the football team has a good season, for example, there may be enough surplus cash to buy bleachers or even band instruments and uniforms.

An educational activity, which should be subsidized largely or entirely from school funds, just as any other part of the program, thus comes to depend on pleasing and attracting the spectators for its continuation and expansion.

The coach can do much to improve the situation by taking a stand on certain matters. If the local sports editor can be made to understand the problems which his paper often has helped aggravate, a real public relations program can be carried on to modify or even change some of the fundamental spectator demands.

The principal, the superintendent, and the school board, must also face and accept the responsibility which is theirs for the majority of the problems. Many of the hazards in sports are due directly to policies which, like Topsy, "just grewed," or to a lack of understanding of the basic issues involved.

When this situation is corrected, many practical measures (to be presented in a later article) will eliminate much of the criticism of interscholastic athletics.

1948 ALL-AMERICA SCHOOLBOY TRACK TEAM

FOLLOWING is Look Magazine's sixth annual All-America High School Track Team, as picked by Dan Ferris, A.A.U. secretary-treasurer:

100-yd. Dash: Howard Bugbee, Redondo (Cal.) H.S., 9.5 sec.

220-yd. Dash: John Bradley, Hoover H.S., Glendale, Cal., 20.8 sec.

440-yd. Run: Gene Cole, Lancaster (Ohio) H.S., 48 sec.

880-yd. Run: Robert Jones, Washington H.S., Alexandria, Va., 1:57.

Mile Run: James Newcomb, Benson Poly H.S., Portland, Ore., 4:23.8.

120-yd. Hurdles: Paul Leming, Beaumont (Tex.) H.S., 14.2 sec.

200-yd. Hurdles: Dean McConn, Marion (Ind.) H.S., 22.1 sec.

High Jump: Jack Razzetto, Hoover H.S., San Diego, Cal., 6-5½.

Broad Jump: George Brown, Jordan H.S., Los Angeles, 23-10½.

Shot Put: Darrow Hooper, North Side H.S., Fort Worth, Tex., 59-10½.

Discus Throw: Darrow Hooper, North Side H.S., 173-2½.

Javelin Throw: Charles Missfeldt, Union H.S., Milwaukie, Ore., 211-1.

Pole Vault: Edward Brown, Froebel H.S., Gary, Ind., 13-1¾.

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PASSING THOUGHTS

(Continued from page 13)

with danger, especially against zone defenses. Against the zone, move the ball quickly with short passes. Use a lot of feints and fakes. Bounce passes are particularly fine weapons with which to advance and feed the ball.

Be particularly careful under your defensive basket. Upon retrieving a loose ball, look up immediately and pass to any free teammate cutting down the floor.

If the back-court is congested, be extremely cautious about how you pass to a teammate. An interception here is almost impossible to defend against and usually culminates in an easy basket. Either motion your teammate away from the hoop, pass to someone else, or dribble away yourself.

Whatever you do, always get the ball away quickly from the defensive board. A hook or baseball pass is very effective here. Get rolling quickly and you will find your team constantly beating the opponents to your front-court.

Don't tap the ball to a teammate if you have time to catch it and pass to him. A tapped ball cannot be controlled too well and frequently goes astray. This becomes downright dangerous under your defensive board.

There are times, however, when a tap furnishes the only possible method of gaining possession. Under these conditions, it is perfectly permissible, of course.

Be patient and cool when passing. Make sure you have an excellent chance of getting the ball to the receiver before letting it go. However, you cannot always wait until you are positive of a completion before passing. Just wait until you have probability on your side, then have the courage to take a reasonable chance.

When freezing the ball, be conservative in your passing. At the same time, don't be caught with the ball or hold it so long that you are forced to make a bad pass. Have a planned pattern in which every man is moving. Pass at once to open teammates and seize every opportunity to go deep into your front-court.

Do not try to force the ball through a defense that has fallen back into the foul lane. Be patient and shoot over them to draw them out. You will get many nice set shots against this type of defense. Do not waste them.

Remember to study your op-

ponents carefully, particularly in the early stages of the game. Look for little tip-offs on how to play them and how to get around them.

Too many coaches look upon the passing game exclusively from the thrower's angle. This is a mistake. The receiver bears just as importantly upon the success of the passing attack. Unless he can constantly maneuver into good receiving position and handle the pass quickly and safely, the passing attack isn't going to amount to much.

In making the catch, it is essential to use only the hands—no other part of the body. You must relax and keep your eyes on the ball until it is safely in your hands. Failure to do either causes fumbles.

AFTER compiling an enviable athletic and academic record at St. Louis U., George V. Hasser is now busy turning out championship basketball, football and baseball teams at St. Louis U. High School. His quintets have won 10 tourneys since 1943, including the state crown in 1946. Among the many fine players produced by Coach Hasser are Ed Macauley and three other members of the great St. Louis U. basketball team.

It is quite simple to throw off an opponent long enough to take a pass. Changes of pace, reverses, and sudden changes of direction are all fine weapons with which to get ahead of the opponent, lose him for an instant, or run him into some other player.

Now for the actual techniques of the various passes.

The shovel pass is a one- or two-handed affair thrown from about the position of the hips. It is started from the back of the body and released in front of the body with an underhand scooping motion. In the two-handed pass, the fingers are placed near the top of the ball with the thumbs pointed in.

This pass is generally thrown under the guard's arms and is preceded, if necessary, by a feint over his arms. It is especially effective when being crowded by a defensive man.

The bounce pass can be dispatched with one or two hands in any direction. When thrown with one hand

forward and to the side, it can be tossed with an overhand motion as in a baseball throw.

A fine one-handed bounce pass can also be made with a sidarm motion. This is very effective when worked in with a body feint to the opposite side. The feint is made simultaneously with the throw and is a nice stunt with which to draw out an opponent immediately in front of you.

The two-handed bounce pass to the front or to the side is executed the same as the two-handed chest push pass, except that the ball is bounced to the receiver.

Like any other pass that must be thrown past a defensive man, the bounce will be more effective if preceded by a feint to throw over the man.

For a more detailed use of the hands and wrists on this pass, refer to the discussion of the short wrist passes later on.

The chest push pass (two hands) may be thrown to the front or to the side and, as a rule, should be preceded by a feint to some other direction. Otherwise an alert opponent may time the pass and intercept it.

In this pass, the ball is held about chest high with the fingers relaxed and the thumbs fairly close together near the top of the ball. The ball is pushed forward and released with a snap of the wrists and fingers. The arms follow through completely.

The hook pass is a one-handed proposition and is particularly effective following a feint under an opponent with a low shovel pass. The wise player will learn to deliver this pass without leaving his feet. When a boy leaves his feet to pass, he too often comes down with the ball still in his possession.

The hook is an excellent weapon with which to start the fast break after rebounding the ball. Perhaps the biggest fault of most hookers is that they throw the ball too hard, making it difficult to catch. Practice is the one thing that will remedy this fault.

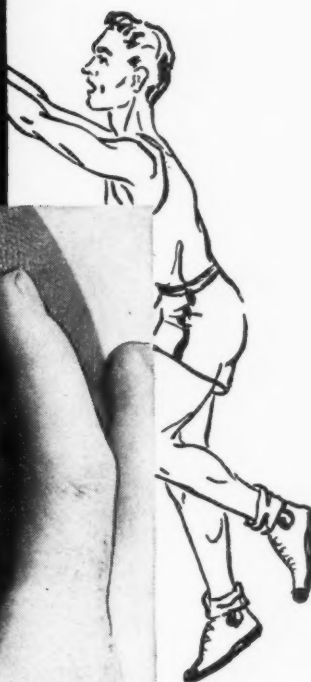
In delivering this pass, the ball is again given balance by the non-throwing hand. It is brought up in both hands and released over the head with a snap of the wrist and a good follow through.

The one-handed chest push pass to the side is executed by shoving the ball out laterally from a chest high position with the palm out and the thumb pointing away from the body. The fingers point up and the arm follows through after the release.

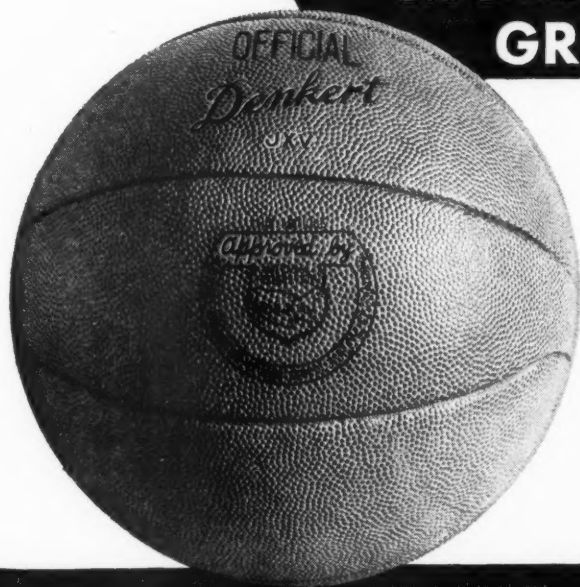
The pass is aided by a preliminary head or body fake in the op-



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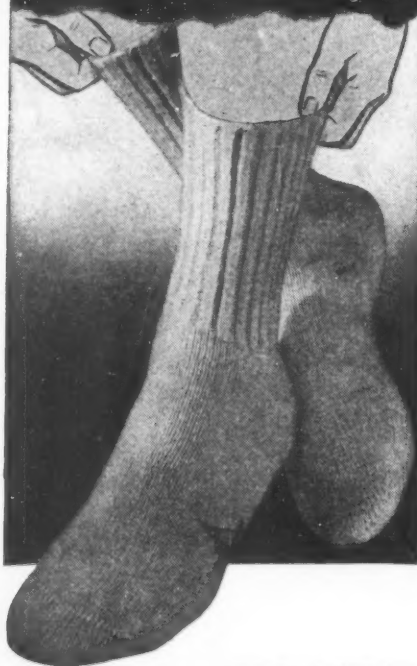
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posite direction. It should be definitely limited to short distances.

Short wrist passes come in handy for quick feeds to cutting teammates. The ball is thrown from the hip with either one or two hands, and may be fed off in any direction. The effectiveness of the pass depends upon a good wrist snap and follow through.

When the ball is passed backward with two hands, the toss resembles a shovel pass in reverse. In other words, the arms and wrists start from in front of the body and the ball is released behind.

On wrist passes to the side, both hands are placed on the same side of the ball with one hand under and balancing the ball and the other doing the throwing.

The baseball pass is balanced with one hand and thrown with the other. It is excellent for distance

and is thrown with the overhand motion of a baseball catcher.

It is a fine medium with which to start a fast break after a rebound, and is often thrown after a one-two hop in the air when distance is required.

Over-the-shoulder passes (one or two hands) are handy weapons when feeding a man cutting behind the post or when setting up a give-and-go in the back court.

When used in the post position to feed a cutter who has moved behind, the pass requires some deception. The ball-handler can effectively disguise the pass by feinting a throw under the arms of his guard or feinting a dribble or a pass to the opposite side.

Once these basic passes are mastered, the individual will be well equipped to meet any reasonable passing situation.

Kentucky's Pivot-Post Attack

(Continued from page 7)

position and enables the two men cutting for the basket to cover both sides of the hoop.

The set-up also allows the man on the weak side to maintain a position that is half offensive and half defensive.

It takes a great deal of practice to get your boys to flow naturally from the fast break into the set pattern. Many times the fast break tends to develop into a helter-skelter attack with everyone running and firing the ball at the hoop without waiting for a proper rebounding pattern. When this happens, you can kiss the game goodbye—unless Lady Luck is smiling on you that evening.

Once the fast break begins, we want all our boys to get into offensive positions as quickly as possible—before the defense can get properly set or balanced.

Our floor plays are numbered and well-defined, and are launched at a voice signal from our principal back-court ball-handler. We stress ball possession. We don't believe in passing the ball just for the sake of being spectacular, and we don't like to take unnecessary chances. We also like to think that our aggressiveness will assure us of a reasonable percentage of the rebounds.

At Kentucky, we don't employ many fundamental drills in practice. Our time is spent on perfecting actual play situations as they fit into our offense and defense.

The first week of practice is devoted to "free workouts." During

this period, the players are practically unsupervised and do whatever they please. The second week finds us ready for business. This two-week period conditions the players' feet and legs for hard work.

Not a single defensive technique is taught during the first four weeks. The time is devoted to building complete confidence in our offense. False moves are eliminated, and the emphasis is on proper execution of assignments.

Insofar as shooting is concerned, we believe that too much stress is being placed on one-hand tosses. We believe that 90% of the time they are unnecessary. Too many boys are standing 20 to 30 feet out front with their defensive men yards away, and shooting the ball up one-handed. The statistics prove that they are getting more shots than ever and scoring less field goals.

Mind you, we don't say there is no place for the one hander. There are times when that is the only way to get the ball up.

Shooting fouls with one hand is ridiculous. Only a small percentage of the players using this method are successful. What sense is there in attempting a free throw with one hand when no one is annoying you and you have 10 seconds to make the toss?

Unless the player has already proven adept at this method, we teach him to throw underhand. And we are indeed proud of the Kentucky record from the foul line.

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Material and the System

(Continued from page 10)

Diag. 8, Single Pivot Variation, Four-Man Weave: No. 2 dribbles inside 3 and hands off to him, then continues over and screens for 4. No. 3 dribbles inside 1 and hands ball to him. Latter passes to 5 and cuts off him for return pass. No. 5 may also pass to 4.

Diag. 9, Triple Post: No. 3 passes to 1 as 5 comes out and screens X1. No. 1 dribbles around screen for score, while 4 and 5 rebound.

Diag. 10, Ball Control Formation: No. 1 dribbles inside 2 and hands ball to him, then continues over and screens X3, after which he stays back for safety. No. 2 passes to 5 and cuts to outside. No. 5 passes to 3 coming down center or gives ball back to 2. No. 4 rebounds on left, 5 in center, and 2 on right. In setting up formation, 4 and 5 play two yards from sidelines even with foul line, while outside men set up a yard from center line.

DEVELOPING THE MATERIAL

Once a coach has decided on the type of material he wants, how can this material be found or developed? I believe that coaches who are at an institution any length of time, can offer no excuses for constantly poor material. Perhaps the following suggestions may be of some help:

1. See that the fundamentals of basketball are included in the physical education program of the elementary schools in your community. Boys at this age should not play a great number of highly competitive games, but should engage in footwork, dribbling, passing, and shooting drills that are attractive and that lead into the coach's style of play.

2. Junior high teams should play a type of basketball similar to that of the senior high. If the senior varsity is employing a fast break, for example, it is important to have the junior high teams playing this type of game, too. Not only will this develop the type of material needed, but it will also activate the junior high players' desire to play on the senior team.

3. Cooperate with and follow the industrial, church, and other amateur leagues in your community that might have players of school age participating. In one instance, four out of the five players who made up a state championship team were found participating on independent teams. They would never

have turned out for the school team if the coach hadn't discovered them. Boys who work after school or who, for some other reason, are not reached by the school program, may be found in these leagues.

4. See that basketball facilities and a basketball program are included in your community's summer playground and recreational plans. Basketball is now a year-round game. Where weather permits, playgrounds should have outdoor courts. Tennis courts, for instance, may be converted into combination surfaces by putting baskets at each end. Summer leagues are possible. The more basketball played in your community, the greater chance you have of developing material.

5. Be sure that you reach every possible candidate enrolled in your school. Every student should fill out a form giving his experience in all sports and his desire to participate. These forms should be followed up and every candidate interviewed. Intramural programs should be provided for those who cannot make the first team. The coach should watch very closely the progress of every candidate and be constantly on the look-out for new and better material.

6. Most important: Be patient with and retain on the squad all real big boys—until you are sure they have no chance. A 6-6 boy, awkward as a freshman, may win a title for you as a senior. I recall one boy in particular who, as a college freshman, was 6-7 but weighed only 165 pounds and was far from a college ball player. This boy went on to become an All-American on a national championship team.

Sound advice to any coach is—don't sell the big man short. The best way to beat the tall man is to get one taller.

In my opinion a good team offense should consist of:

(a) A fast-break attack which attempts to score before the defense can get set.

(b) A second drive off the fast break in an attempt to score before the defense can get completely organized.

(c) A definite attack against the defense after it is set, whether it be man-to-man, zone, or any of the variations.

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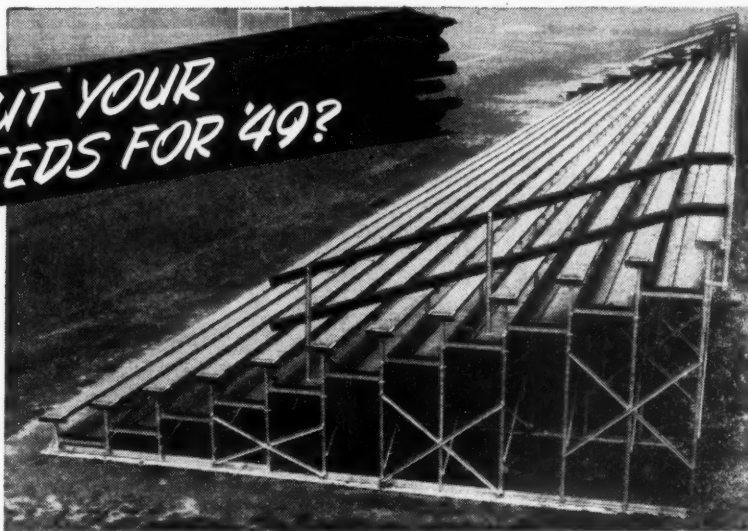
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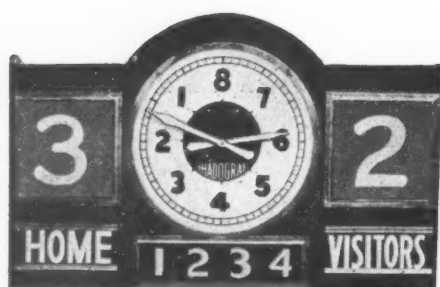
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For further information write

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Gymnasium Lighting Plans

(Continued from page 32)

initially. An adequate program of cleaning, relamping, and repainting is needed to insure getting the light paid for. Periodic measurements of the illumination with a light meter are valuable in establishing a maintenance program and checking its effectiveness.

Fig. 1 shows a layout of the activities which can be accommodated in a multi-sport gym 96 feet by 76 feet. The multiplicity of lines may seem confusing on a plan view, particularly when all are in black. But experience in actual play has shown that with the lines of different colors, the players can easily identify the boundaries of the game in progress.

The lighting layouts in Figs. 2 to 5 have been worked out in the basis of these court locations.

The lighting layouts assume the ceiling height of 23 feet indicated in the gymnasium survey. Ceiling heights greater than 23 feet have two advantages—added clearance for aerial sports, and higher mounting of the lighting equipment with attendant gain in uniformity of illumination.

Fig. 2 shows a fluorescent lighting layout, employing 85-watt (formerly 100-watt) T-17 lamps in two-lamp industrial reflectors. The luminaires are circulated as indicated to provide five footcandles or 20 footcandles.

The lower value—for pre-game illumination, dances, and other activities of a social nature—may well be provided by complexion-flattering "soft white" lamps. The entire fluorescent system, providing 20 footcandles, would be operated most of the time the gym is in use. The uniformity of illumination is excellent.

The increase from 20 to 30 footcandles for games with spectators is obtained by supplementary 500-watt filament lamps in high bay medium-spread reflectors. The relatively short hours of use of this supplementary lighting do not usually justify the higher initial cost of fluorescent equipment.

It will be noted that two high bay reflectors with 500-watt lamps are located in front of each basket, as was found important in the visibility studies of basketball.

Prior to a basketball game, an illumination of 20 footcandles may be employed on the seating area with only 5 footcandles on the court. Then, after the spectators are safely seated, the lighting over the seating area may be turned off and the full

court lighting turned on, thus "setting the stage" for the game.

A layout employing filament lamps in high bay medium-spread reflectors is shown in Fig. 3.

Reflectors of etched aluminum have advantages of low brightness, ruggedness, and permanence of finish. All the reflectors employ 500-watt lamps except those at the corners of the championship basketball court, where 750-watt or pairs of 500-watt lamps are recommended. The uniformity of illumination is excellent. With circuiting as indicated, levels of 5, 20, or 30 footcandles are available.

Use of reflectors which will accommodate 100-watt lamps, with wiring capacity for this wattage, is likely to prove a good investment. Simple socket adapters will provide the correct light center length for 500-watt lamps in these reflectors.

With filament lighting, one way to increase the illumination for exhibitions and games with spectators is to raise the voltage applied to the lamps. This may be done with variable-voltage auto-transformers or with transformers having over-voltage taps.

When filament lamps are operated 10% above rated voltage, for example, the light output is increased approximately 35%, the wattage is increased approximately 17%, and the life is reduced to approximately one-quarter of rating.

Summary

Most high school gyms are not considered well lighted.

The Illuminating Engineering Society's Committee on Sports and Recreational Area Lighting recommends for high school gymnasiums 5 footcandles for general assemblies and dances, 20 footcandles for general exercising and games without spectators, and 30 footcandles for games with spectators. The Committee recommends 50 footcandles for college gymnasiums.

Fluorescent lighting has the advantage of low brightness of source and reflector. This is particularly important when the gym is used for "Aerial" sports.

Layouts are presented of fluorescent and filament lighting systems which meet the Committee recommendation of three-step illumination levels for high school gyms.

This is a condensed version of a paper presented before the recent Illuminating Engineering Society convention by C. J. Allen and R. E. Holmes, General Electric Co. illuminating engineers.

Tech's Kicking Game

(Continued from page 20)

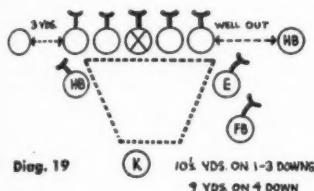
reinforces to the right, releasing if no one breaks through.

The line holds tight, tackle to tackle, with the tackles riding out the defensive tackles and the ends releasing with the snap.

Diag. 19 delineates the protection against regular punts.

On fourth down, the left end may move in tight and block. The line plays tight, stepping slightly forward with the outside leg to prevent pulling by the defense. The fastest or best tackling back takes the right end position and lines up well outside. He always releases on punts.

The right end, being bigger, takes the right half slot. All backs step up with their inside leg and seal the gap with the line. They wait in place and roll the defense coming into them slightly outside in order to protect the kicking triangle.



The kicker says "set." When he is ready, he opens his hands to signal the center. The latter may now pass the ball whenever he wishes. Since only the offensive ends charge, this keeps the defense from anticipating the snap. The two key men (kicker and center) operate only when ready.

Dodd's kicking pointers are simply but effective. He doesn't overburden his kicker with complicated rules.

1. Stand with the right foot forward (except on fourth down). Take a half step with the right foot, a full step with the left, and kick.

2. Drop the ball straight, slightly turned in at the forward point.

3. Place the ball on the instep with the foot depressed and locked at the ankle.

4. When the ball hits the foot, the knee and leg should be locked and stiff.

5. For a high kick, hold the ball higher and closer to the body.

6. For a low kick, hold the ball lower and farther away.

This is the second of two articles on Georgia Tech football by Floyd B. Schwartzwalder, head coach at Muhlenberg College. The first of the series (based on Bobby Dodd's lectures at the Eastern Pennsylvania Coaches Assn. summer school) covered Dodd's passing game and practice schedule.

From Gym Play
to...

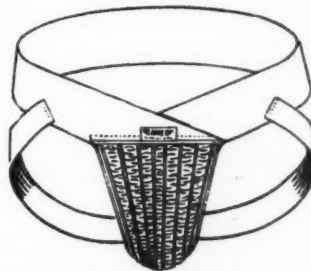
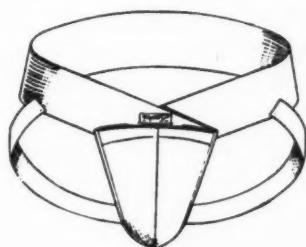
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Coaches' Corner

Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 7 East 12 St., New York 3, N. Y.

One of those old-time football coaches now teaching Sunday school never muffed a chance to ring in some resounding grid similes, leading some members of the congregation to feel that he was dispensing football lore at the cost of religion. One day two parishioners were listening to him hold forth. "Where is he?" asked one, consulting the text for the day.

"I think," observed the other judiciously, "he's got the Devil on the 20-yard line."

The 1938 Kansas St. - Oklahoma Aggie game was played in a pouring rain, with the umpire spending most of his time under an umbrella on the sidelines. Kansas had been using sleeper plays with some success, but the Aggies had begun to break them up. Now the Kansans called another, but no sleeper was to be seen. As the pass floated toward the sideline, a Kansan suddenly appeared—from under the umpire's umbrella!

Gem No. 765847 from the pen of Red Smith, our favorite sports columnist: "The Braves' world series headquarters will be established in the Somerset Hotel, a quiet pool of gentility which, if memory serves, was the Boston address of the St. Louis Gashouse Gang until, by mutual agreement, the club moved elsewhere. Those old Cardinals were sportsmen to the core: they were, it was decided, out of place in a hotel whose game laws forbade shooting pigeons from the courtyard windows."

The "Earley" bird catches the worm. That's Joe Earley's story, anyhow. Joe, a Cleveland Indian fan, got a bit miffed toward the end of the past season. Too many players, he thought, were getting special "days." Why couldn't the Indians give a "day" to some one who really needed one. So he sent a letter to the big chief, Bill Veeck.

Bill thought it was a dandy idea. September 28th was made "Earley Day." Before the Indians' game with the White Sox, Earley was brought down to home plate and serenaded by a big band.

Then he was plied with a truckload of gifts, including: a goat, one big pig, five little pigs, a cow, a refrigerator, a radio, a wrist watch, a washing machine, a new car, a television set, and a raft of other things. He also received

a life-time pass to all Cleveland games and a check for \$2,600, which he donated to the Cancer Fund.

That wasn't all the wampum the Indians dished out, either. Other fans, picked from the stands, also were honored. One received six stepladders. Another a live turkey. Another a basket of cabbages. One lady received three live hares, and a man got a live horse.

We got a boot out of the Hartwick College football brochure recently sent us by Ray Davis, super tub thumper. In recapitulating the 1947 season, the brochure points out that the Warriors started out with a bang, winning five straight games by shut-outs. Then the floor came up and hit 'em, and Hartwick went on to lose its last four games.

The reason for this sharp reversal of form? The brochure states: "Players were not well-conditioned at mid-season!" Seems the boys ran out of condition after the first five games.

Records, records, everybody's crazy about records—who scored the most points in a single game, who kicked the most field goals, who got the biggest lump from meeting Bronko Nagurski head on, etc. And here they are, men—the outstanding records in modern football:

Longest run from scrimmage—110 yards, George S. McCaa, Lafayette vs. Swarthmore, 1909.

Longest forward pass—71 yards, Kenny Washington, Hollywood Bears vs. Los Angeles Bulldogs, 1945.

Longest kick (without roll)—91 yards, Ralph Kercheval, formerly of Kentucky, in exhibition, 1935.

Longest field goal—63 yards, Mark Payne, Dakota Wesleyan vs. Northern Normal, 1915.

Most points scored in one game—100 (12 touchdowns and 28 extra points), Leo Schlick, St. Viator College vs. Lane College, 1916.

Most field goals in one game—17, Frosty Peters, Montana Frosh vs. Billings Polly, 1924.

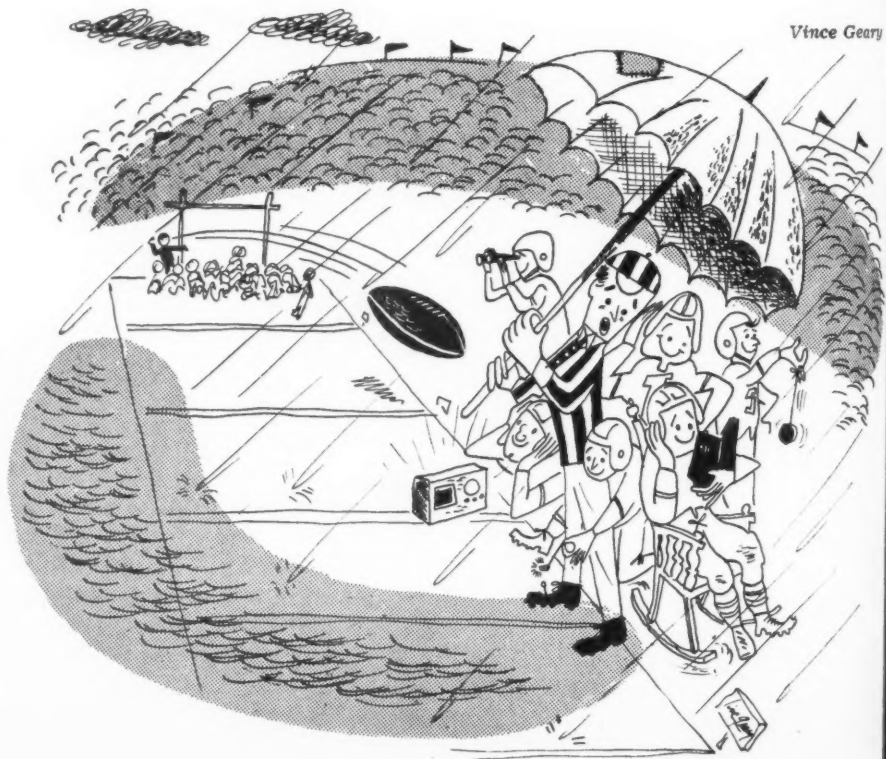
Pardon us for tooting our horn, but we're justifiably proud of the way *Scholastic Coach* gets around. Take this letter from Father Kevin Pyle of St. Joseph's College, County Galway, Eire:

"I am keenly interested in helping on athletics here in Eire, especially in the secondary colleges, and I would like to subscribe to *Scholastic Coach*. Your magazine was warmly recommended to me by one of the U.S.A. Olympic team."

And here's another bouquet from Len Richardson, of Portland, Ore. "The interest stirred up over your presentation of my articles on a scientific physical ed program in your April and May issues exceeded all expectations. I have answered mail from 15 states, interviewed six students from nearby colleges, and letters are still trickling in.

"Your September number carrying my article on *The Diamond T* arrived today along with five inquiries from coaches wishing to adopt the system." That'll teach him to write articles for us!

Mention of the Diamond T recalls the doubt we felt upon reading Len Richardson's recommendation of a sprinting-start stance for backs and



ends. Richardson, after extensive testing, concluded that the four-point track stance offered the fastest possible way of starting. We felt that the stance afforded a quick getaway, all right, but that it was a handicap in ball-handling, since the backs had to come up sharply from a low position.

We forgot all about this after the issue appeared until, suddenly, while reading Frosty England's book on *Coaching the T Formation* (see page 65 for review), we came across this passage on page 35:

"We encourage our backs to take a four-point sprinter's stance. . . . Why not? If track men can start faster with the typical four-point sprinter's stance, that it what we want, too. I know what you may be thinking: What about the speed of their movements to the left or right? Well, on all our plays where the halves move left or right and become a ball-carrier, we find a very noticeable fake being executed by the quarterback and one of the other backs before the back in question gets the pitch-out. He can thus get there in plenty of time . . . being low and starting from the sprinter's stance adds to our deception."

Frosty's word is good enough for us. Touché, Mr. Richardson.

The day we went to press last month, we received a note from Frank Colucci telling us that the knotty rules poser he described in *Coaches' Corner* was no longer knotty—the new football code took care of it nicely. The point was also brought to our attention by A. L. Walsh, secretary of the Western Pennsylvania Football Officials Assn.

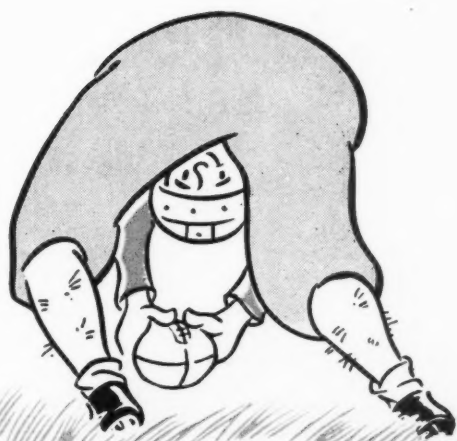
The great Glenn Dobbs has played a lot of football the past 10 years, but the game that stands out most vividly in his mind is a high school contest in which he played just three minutes and didn't score a point! He tells about it in *My Greatest Day in Football*, a review of which appears on page 67.

It happened back in 1938 when Glenn was starring for Frederick (Okla.) High School. Frederick came up to its big game against Mangum High a decided underdog. Three minutes after the kick-off, Glenn was tossed off the field by an umpire who mistakenly thought he saw Glenn strike an opponent.

"When I departed," continues Glenn, "our team, with all the boys crying, declared they would win this one. We had no tailback now, so our blocking back moved to that position. We had no punter, but our left guard said he'd punt. . . . Our boys were so mad, determined and courageous that they went out and played the finest ball game I have ever seen, bar none—and what made it more thrilling was that they had told me that they were playing this one for me. . . ."

"I had absolutely nothing to do with the result of the game (won by Frederick, 13 to 12)—the greatest day or victory in my book . . . that will always be the finest thing I ever got out of playing football."

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Coaches, write for free booklet "How to Lace a Football". It tells how to insert bladders in the casing and then lace up the ball in an approved official manner. Write Harry Andrews, Sporting Goods Division, Dewey and Almy Chemical Company, Cambridge, Massachusetts.

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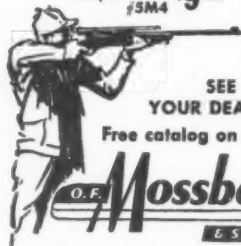
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New Films

- **STRAPPING OF ATHLETES.** Directed by Edward D. O'Donnell. Produced by The Seamless Rubber Co. 16-mm. silent, Kodachrome, 2 reels. Running time, 24 minutes. Free.

SCHOOL and college trainers will find this film of exceptional value in learning the soundest methods of taping the parts of the body most frequently injured in athletics.

Supportive and preventive tapings are shown for the ankle, Achilles' tendon, knee joint, shoulder, low back area, shins, thighs, neck, elbow, and hand.

The demonstrator does a remarkable job of applying these bandages, using specially printed tape for the purpose. This enables you to see the line for all bandage positions as well as the step-by-step progression.

The film may be obtained by writing to The Seamless Rubber Co., Athletic Division, New Haven 3, Conn.

- **BASKETBALL TODAY.** Directed by A. A. Schabinger. Produced by the Official Sports Film Service by authority of the National Federation. 16-mm., sound. Running time, 26 minutes. Sponsored by General Mills and Wilson Sporting Goods Co. Free.

THIS film affords an excellent means of studying the official basketball rules in action. Slow motion permits analysis of the synchronized movements of the skilled player, then fundamental drills show how these movements are blended into team play.

The picture shows details of producing a basketball; good habits of living and eating; the National Basketball Committee making the rules; safety measures for fans; officials' positions for the center jump; jump violations; free-throw positions and violations; substitutions; personal fouls; rights of the dribbler; screen plays; and many other things.

To obtain this film write your state high school association office. If unavailable there write to the Official Sports Film Service, 7 South Dearborn St., Chicago 3, Ill.

The Fallacy of Escopetazophobia

(Continued from page 42)

the things they need to know about guns. The National Rifle Association has, in the past twenty years, taught more than 1,500,000 boys (and girls) to shoot, on more than a thousand school and camp ranges—without a single accident.

Most of the training was done by school teachers, YMCA secretaries, scout masters, camp councilors. It doesn't require an expert with a tremendous amount of experience to teach children to shoot. Yet no boy or girl has ever been hurt by a firearms accident on any NRA-conducted range. They are taught first, last, and always to handle guns safely. And they do.

Your edict may keep guns out of your school—which would be a pity. But it won't keep guns out of the hands of the students when they're away from school!

Guns draw kids as sugar draws flies. Forbidden guns have an added attraction. The boy who knows guns, who has guns of his own, leaves strange guns alone and handles all guns safely. Why not see that he has that knowledge?

Besides, shooting is fun! You might as well resign yourself; there's going to be more guns, more shooting, in the years to come than in the years past.

Some eleven million American boys learned to shoot during the war years—and they like it. There'll be more guns and better guns, more places and better places to shoot, more hunting and better hunting;

in these postwar years than ever before.

There'll be more places, too, where shooting is taught. You don't have to be a shooter yourself (although you would enjoy it) in order to give your students this safety-first training in a fine clean sport.

There's probably a rifle club in your community (you can find out by writing The National Rifle Association, 1600 Rhode Island Avenue, Washington, D. C.) where accredited instructors will teach your students to shoot and to handle firearms safely. Why not send them—before they figure in newspaper headlines on one side or the other of one of those "didn't know it was loaded" tragedies?

Or, better still, why not go with them and learn to shoot with them, then start a club in your own school? For that is one of the finest things about shooting—it is practically the only sport that is no respecter of size, age, sex, or natural athletic ability! Mom and the kids can shoot on equal terms with dad.

So, if you've been suffering from "escopetazophobia"—remember, this fear (like "firearms accidents") is based on ignorance. Get acquainted with guns—and give your students a chance to "meet" them, too.

E. B. Mann, one of the country's foremost writers of western fiction, is former editor of *The American Rifleman*. He now free lances for numerous publications and edits books on guns and shooting for a publishing company.

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568 Pages

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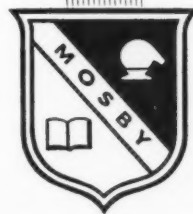
With the help of suggestions from many specialists this book has been thoroughly revised and brought up to date. New material includes a self-appraisal chart for evaluating personal health. There has been a thorough reorganization of the material on communicable diseases with the addition of a new chapter on this subject. Appendix A carries the latest standards for communicable disease control. The latest statistical data in the field of public health are used.

There are new sections dealing with such topics as voluntary health agencies, new developments in nutrition, the Rh factor, DDT, new insect repellents, new antibiotics, gamma globulin, and many other developments in the field of health and preventive medicine.

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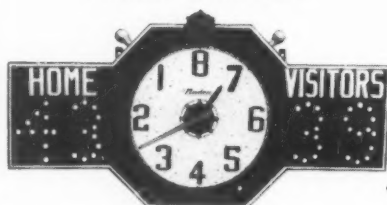
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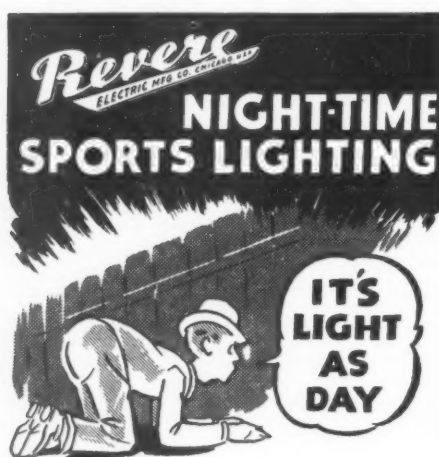
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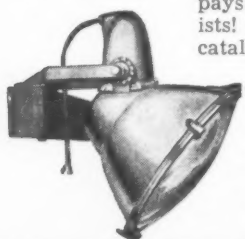
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National Federation NEWS

Edited by H. V. PORTER



A SURVEY of fees paid football officials in the state of Washington has been made by Robert Hall of Tacoma. Full details may be obtained from Secretary Henry DeYoung of Vancouver. Here are a few facts gleaned from the summary.

Three of the leagues, which include the schools of Seattle and Spokane, employ four officials for most games. All the other leagues in the state use three officials or, as in the case of the smallest schools, two officials. Nearly every league pays the referee slightly more than the other officials. Typical payments follow:

Seattle H. S. League\$13-9-9-9
Spokane City League ..\$14-12-12-12
Yakima Valley League..\$12.50-10-10
Northwest League\$15-12-12
Tri-County League\$12-9-9

In practically every case, there is an allowance of six cents per mile for travel.

Interscholastic boxing. Only four states sponsor interscholastic boxing. A number of others permit it but not on a state-wide or section-wide basis. Boxing on an interscholastic level has always been regarded with disapproval by most high school men, and events in pro boxing the past year have substantiated their opinion.

One attempt has been made to institute an inter-state boxing tournament. This is the meet at the U. of Virginia. Prior to last year, this meet was held without sanction of the interested state associations. Last year the nature of the meet was changed so that it became an open competition for specific age groups rather than a contest between schools. A few schools from neighboring states permitted their boys to compete as unattached individuals.

The question of interscholastic boxing was recently brought before the Tennessee board of control. The board voted against having the state association sponsor any type of interscholastic boxing contest. However, this does not prevent individual schools from participating in the sport.

In many states, a number of the larger high schools with well-trained personnel offer the sport on an intramural basis. When handled in this manner, it often is a desirable activity.

Oregon. By mutual agreement of both coaches, a rubber or composition-covered football may be used in any game.

A state championship in six-man football is provided for "B" schools.

These schools are divided into eight districts and the district champions continue to play until a state championship is determined. For tie games, a winner is determined by counting the number of 1st downs. If each team makes the same number of 1st downs the highest total net yardage determines the winner. Squads are limited to twelve players for the state championship series.

Arkansas. The state association letterhead carries the following notation: "Health, character, sportsmanship and citizenship first—victories in contests second."

Interscholastic activity in the state has greatly increased since the inauguration of a full-time executive staff. This staff has given needed guidance in all of the major sports. A series of meetings in football and basketball has been set up and a baseball school is sponsored. Plans are being made to provide one full day for baseball activity in connection with the state-wide coaching school next summer.

Virginia. The broad program sponsored by the state association is being further expanded. A series of meetings in football and basketball is now being considered and a more effective plan for registration and training of athletic officials for the major sports is being studied.

New Jersey. The following is from a recent issue of the state association bulletin: "Respect for football and basketball officials must be taught by every interscholastic group. Mistakes of officials, real or alleged, should be accepted as 'breaks of the game.' Coaches who storm out on the floor in spectacular protest should be disciplined and, if they persist, their duties should be delegated to someone else. Crowd behavior tends to take on the characteristics of sportsmanship as demonstrated by the home team, the home coach, and the home crowd. Many of the best officials complain that sportsmanship grew worse during the past year. The high school administrators are challenged to turn the tide and start this important attribute of the game in the other direction."

Safety equipment. A light, rubber, teeth-guard for football players is available. It is based on the theory that most teeth injuries occur from a blow on the head or chin rather than from a direct blow from the front. The teeth-guard provides a one-eighth inch rubber cushion to prevent the teeth from clashing.

A new type athletic tape contains material resembling the oil secreted

by the skin. This permits it to be worn for a considerable period of time without causing the usual irritation. It is also reported that the tape sticks better.

Considerable progress is being made on production of a type of helmet which is elastic enough to give some protection to the opponent while at the same time preventing injury to the wearer. With a shell of this type it is not essential that a soft outside covering be provided. A similar type shoulder pad may follow. There is also continued experimentation with the hard-shell helmet with a sponge rubber coating on the outside. A number of manufacturers are aiming at production for the 1949 season.

Several laboratories are continuing their attempts to perfect a rubber-covered football which will have practically the same kicking and passing reaction as the traditional ball.

The state association of Washington has made it illegal for a school to use lime for marking football fields. Schools are expected to substitute gypsum, marking plaster or silica.

Wyoming. The state association issues an attractive bulletin in charge of Secretary E. M. Thompson. The latest bulletin gives complete details for the state football championship series and for the state championship in six-man football. A special committee reports on a study of possible athletic accident benefit plans for Wyoming high schools. The committee has recommended the plan offered by the Denver Company which is co-operating with half a dozen of the state associations in providing coverage.

Wyoming is one of the many states where a physical examination is required for all participants in football, basketball, and track.

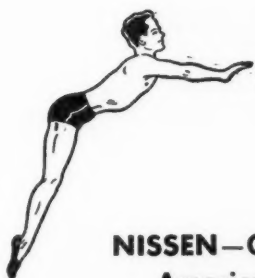
Baseball participation. The program of 1948 involved about 8,500 schools which sponsored the sport on an interscholastic level, and many others which provided opportunity through informal practice. This program was administered by approximately 15,000 coaches, 25,000 umpires, 10,000 team managers, 46 state associations, and 200,000 players.

Twenty-nine states sponsored a baseball series leading up to a state championship. More than two-thirds of the states reported increases in participation, ranging from an increase of 10% in Alabama to 110% in Georgia.

Other increases follow: Kentucky 20%, North Carolina 25%, Idaho 48%, Tennessee 35%, Wisconsin 33%, and West Virginia 63%.

In Ohio, practically all of the large and medium sized schools participated in the sport and more than 800 schools had teams. In Mississippi, the number of schools participating has jumped from 11 in 1945 to about 150 in 1948.

Attendance also has jumped. A crowd of 5,000 sat in on the Illinois state finals.



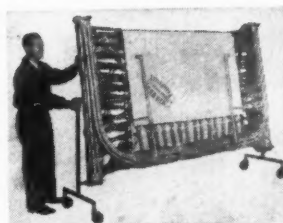
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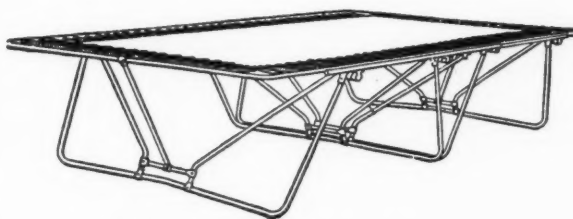
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New Books on the Sport Shelf

- **ANNOTATED BIBLIOGRAPHY OF BASKETBALL LITERATURE.** By Robert M. Bruce. Pp. 151. Published by The National Assn. of Basketball Coaches. Distributed by John W. Bunn, Springfield (Mass.) College. \$1.10.

AS far as we know, this represents the only major bibliography extant on the game of basketball.

Published by the National Association of Basketball Coaches, it contains an exhaustive list of books, articles, unpublished material, visual aids, pamphlets, monographs, year-books, and commercial publications dealing with every phase of the game (coaching, playing, history, etc.). What makes these materials particularly valuable is the fact that they are all carefully indexed and annotated.

The book thus ties the many varied sources of basketball material from 1891 through 1947, together into a single unit for the practical use of teachers, coaches, and players.

All in all, the book presents 1,375 references, including 57 books, 1,127 magazine articles, 24 visual aids, and 64 pamphlets, monographs, etc. The classified index is particularly valuable. The 25 headings therein enable you to put your finger quickly on materials on the fast break, zone defense, set offenses, and all the other technical aspects of the game.

(See adv. on this page.)

- **GRIDIRON GRENADEIERS** (The Story of West Point Football). By Tim Cohane. Pp. 320. Illustrated—photographs. New York: G. P. Putnam's Sons. \$3.50.

THE day Tim Cohane set one of his size 12 sabots on the good earth of West Point, he fell in love—with the Academy, the Corps, and especially the football team.

Since Tim is a sentimental Irishman with a wondrous gift of gab, who also happens to be one of the best sports editors (*Look Magazine*) in captivity, it was just a question of time until he unburdened his fulsome heart on his Royal Portable.

Gridiron Grenadiers is the brain-child of this love match. And a very wholesome, bouncy, entertaining baby it is. Tim does a magnificent job of capturing the color and spirit of West Point football from that day in 1890 when Colonel Hawkins sent the first Army team against Navy with the admonition that "I shall slug the first Army player who leaves the field in an upright position," down through the plush days of Blanchard and Davis.

Tim lingers warmly and humorously on the Dalys, McEwans, Oliphants, Cagles, Wilsons, and Blaiks of West Point football. He recounts

the fabulous games with Navy, Notre Dame, Pennsylvania, Michigan, Illinois, and the rest, frequently taking you behind the scenes for exciting "inside" stories, most of which have never seen print before.

This isn't one of those shrill, corn-festooned epics in the Bill Stern tradition. It is a sound, adult, exciting piece of writing by a fine craftsman.

We recommend it to every football fan who enjoys the written word.

- **RUPP'S CHAMPIONSHIP BASKETBALL** (For Player, Coach and Fan). By Adolph F. Rupp. Pp. 320. Illustrated—diagrams and photographs. New York: Prentice-Hall, Inc. \$3.

OLD Rupp and Ready is as good a basketball coach as the game has ever seen and his teams are a joy "throned on the highest bliss" to watch. The Wildcats captured the N.C.A.A. title last season and if they fail to repeat this year the experts will scream for a saliva test.

The 1948 club was the greatest college aggregation we have ever seen. Combining a lightning-like fast break with a smooth, brilliant set offense, it handled the ball flawlessly and attacked with an astonishing economy of waste motion.

The constant player balance and the transitions from fast break to slow break (and vice versa) were cameos of perfection.

As you'd expect, Coach Rupp has been swamped with requests for word pictures of his style of game. *Rupp's Championship Basketball* is the answer, and, we may add, an answer that ought to hit the jackpot.

The Kentucky mastermind presents the elements of his game exactly as he teaches them, in a manner simple enough for anyone to grasp.

After outlining his system of conditioning and his work on the basic fundamentals, Rupp delves into his offense. He first expounds the essentials of his attack, such as individual weapons, screen plays, and offensive guard play; then coordinates them into his five-man attack.

He describes clearly and thoroughly his pivot-post and continuity of offense, as well as his fast break, illustrating everything with nice, easy-to-follow diagrams.

Rupp then analyzes the fundamentals of individual defense and shows how these are incorporated into team defenses—both man-to-man and zone. Also included are defenses against the fast break and other special attacking measures.

The rest of the book is concerned with substituting and time-outs, organization on trips, tournament play, the practice week, the training table,

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As you may see, this is an ambitious line-up. Rupp covers just about everything having to do with fundamentals, team play, conditioning, and coaching philosophy. Exactly 107 diagrams and 15 sets of pictures supplement the text.

If you want to know how Kentucky does it, here's your chance.

- **COACHING THE T FORMATION.** By Forrest W. England. Pp. 182. Illustrated—photographs and diagrams. Jonesboro, Ark.: Arkansas State College Press. \$3.75.

THERE will always be an England, and in this instance it spells good news for the coaching brethren. The England in question is Frosty, head man at Arkansas State, and what he doesn't know about the T can be inscribed on the head of a tsetse fly.

Frosty's book is completely steeped in hard, concrete T facts. "There is no space wasted on training, reminiscing, and scouting." Frosty utilizes every millimeter of space for a practical analysis of 14 T areas, namely:

T philosophy, offensive line play, offensive backfield play, downfield blocking, meeting changing defenses, cross-bucks, running the ends, defense against the T, off-tackle offense, inside-tackle offense, offense up the middle, forward pass offense, offense against the 5-, 4-, and 7-man lines, and quarterback strategy.

England's interpretation of the T is sound and imaginative. He covers every angle thoroughly and boldly, so that even the T diehard will find plenty of new ideas to stimulate him.

Along with his analytical analyses, Frosty includes 134 diagrams illustrating specific attack sequences.

The book is a neat addition to the literature on the T.

- **PLAYING AND COACHING WATER POLO.** By James R. Smith. Pp. 150. Illustrated—photographs and diagrams. Los Angeles: Warren F. Lewis, Publisher. \$3.50.

THE publishers of this text claim it is the only complete book on water polo ever published anywhere in the world.

We have no way of checking the authenticity of this avouchment. But, after paddling through the book, we will say this: We don't see how it can be improved upon.

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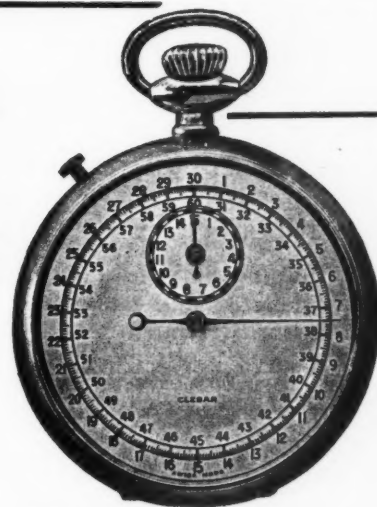
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supplement the text. The clarity of the pictures is amazing, considering the fact they were taken under actual game conditions in the water.

The book is printed on fine heavy gloss stock and should provide a superb guide for all coaches and players.

- **TEACHING SWIMMING.** By Paul W. Lukens. Pp. 34. Minneapolis: Burgess Publishing Co. \$1.50.

PREPARED expressly as a teaching tool, particularly for the non-specialist, this manual should prove exceedingly helpful to the many physical education teachers who find themselves called upon to give swimming instruction.

The author is a nationally famous swimming instructor. In his 24 years at Hibbing (Minn.) High, his teams have won 11 state titles and established four national records.

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In his book he takes up the problem of beginning swimming and analyzes all the basic strokes, turns, and dives. He also includes helpful materials on life-saving and water safety, water games, teaching tests and checks, and teaching outlines.

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- **REPORT ON THE NATIONAL CONFERENCE ON UNDERGRADUATE PROFESSIONAL PREPARATION IN PHYSICAL EDUCATION, HEALTH EDUCATION AND RECREATION.** Pp. 40. \$1.

FIFTY-FIVE outstanding professional leaders, nine sponsoring organizations, and 19 cooperating groups participated in The National Conference on Undergraduate Professional Preparation in Physical Education, Health Education, and Recreation held at Weston, W. Va., last May 16-27.

Financed by The Athlete Institute, this was the first conference of its kind ever held in the U.S. The Report should prove of excellent value in the improvement of professional preparation of teachers and leaders in the field.

It is terse, to the point, and covers the entire field comprehensively. It may be used constructively:

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4. To assist accreditation and certification agencies in the development of appropriate standards.

5. As a guide for institutions considering the incorporation of programs of professional preparation.

6. As a basis for discussion groups and workshops.

Copies of this report may be obtained, postpaid, at \$1 each by writing to The Athletic Institute, 209 South State St., Chicago 4, Ill.

• 1949 SEAL-O-SAN BASKETBALL COACHES DIGEST and 1949 SEAL-O-SAN BASKETBALL SHOT CHARTS. Illustrated—photographs and diagrams. Huntington, Ind.: Huntington Laboratories Inc. Free.

BASKETBALL men will "eat" up these superlative coaching aids—offered to them absolutely free.

The *Coaches Digest* (8th edition) is bigger, better, and more attractive than ever, featuring a raft of wonderful coaching materials on offense, defense, fundamentals, and officiating.

The articles represent the cream of the crop that appeared in *Scholastic Coach* and other magazines the past season. Famous coaches contributing articles include Doggie Julian, Everett S. Dean, and Cliff Wells.

Shot Charts, as the title implies, contain a host of shot charts and summaries which will enable you to keep tabs on the shooting performances of your players. Also featured are many play diagrams for scouting purposes, valuable hints on the construction of a portable floor, an article on strapping and bandaging, and a treatise on the preparation and care of gym floors.

For your free copy, check the Master Coupon under the "Huntington Labs." listing on page 71.

• MY GREATEST DAY IN FOOTBALL. By 37 Famous Coaches and Players. Pp. 210. Illustrated—photographs. New York: A. S. Barnes and Co. \$3.

IF you like your football action fast and furious, you'll enjoy tackling this one—an authoritative collection of some of the most thrilling episodes in grid history, told to you directly by the famous stars who figured in them.

Thirty-seven of the greatest names in football history relate the greatest thrill of their football careers. Each man is introduced interestingly by the authors and each story is furnished with the line-ups of the participating teams.

Among the outstanding contributors are: Sammy Baugh, Matty Bell, Red Blaik, Doc Blanchard, Glenn Davis, Paul Brown, Bill Dudley, Don Hutson, Lou Little and Sid Luckman.

• TRAMPOLINING. By Newton C. Loken. Pp. 26. Illustrated—free-line drawings. Ann Arbor, Mich.: The Overbeck Co. 75¢.

GYMNASTIC fans will readily recognize the author as the fellow who won the national collegiate all-around gymnastics title in 1942.

(Continued on page 68)

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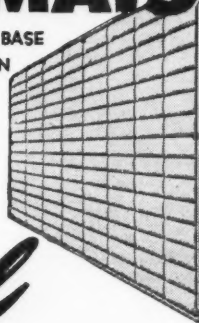
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A limited supply of the booklets is available. If you are actually interested in the subject, you may obtain a copy by writing to the F. Ellwood Allen Organization, 101 Park Avenue, New York 17, N.Y.

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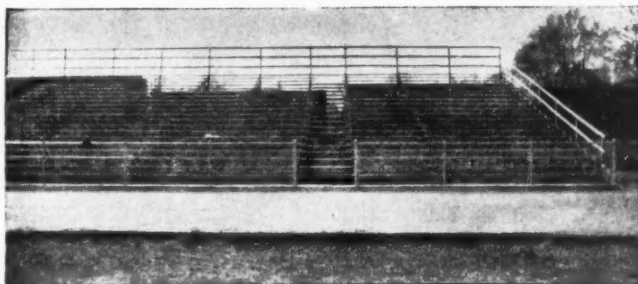
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More than 50 half-tone illustrations illustrate the book. Since Harvard football goes all the way back to the beginning of the game, this book, in a sense, is also a history of the sport.

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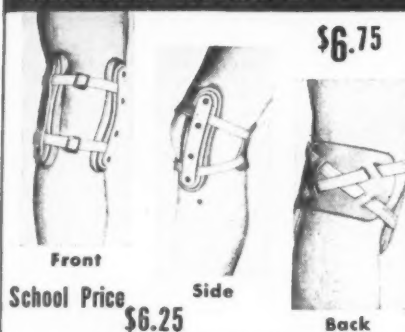
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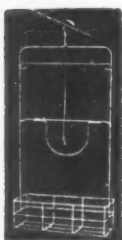
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Bench Strategy by Clair Bee

(Continued from page 9)

safe? When should the free-throw be waived?

Boys look to their coach for the answers and he must assume the responsibility. Against a strongly rallying opponent, a change of tactics which stresses possession is usually a good move. In some cases, a fresh substitution can give a tired team the necessary lift.

Time after time, a team hopelessly outclassed throughout most of the game will suddenly come to life in the closing minutes and make a dangerous surge. For some inexplicable reason, the team which has been superior throughout the game will lose its poise.

Here is where the work done in practice will pay off. If you've practiced a "sleeper" play, now is the time to use it. Or you may call upon that "spot" player, especially if he is a good dribbler. If the situation has been rehearsed and the regulars know why the spot man is being rushed into the game, the tactics stand a good chance of working.

During the course of the season, a team may expect to meet a variety of defenses—all types of zones, the man-to-man with variations, and the pressing defense. Then, too, there is the team which plays percentage basketball, slowing the game down to a snail's pace, holding the ball up when attacking, and waiting for a sure shot.

Another opponent may rely exclusively on the quick break, using it with such speed and perfection that they nearly run your team off the court.

PREPARE IN ADVANCE

The coach who waits until game time to prepare his players for the various types of offense and defense, is going to find it almost impossible to adequately meet anything out of the ordinary. Scouting and skull practices are essential to proper preparation.

Since the quick break is used by nine out of ten teams, we spend considerable time on defensive practice against this dangerous weapon. There are six parts to this phase of our defense.

1. Defensive balance—setting up our attack so that at least two players are always back for protection.

2. Following up all shots and guarding the opponent who rebounds the ball as closely as possible.

3. If the opponents always try to get the ball to one particular player, we cover that opponent soon as a shot is attempted. We usually assign a man to this job.

4. Stopping the first pass by covering all possible receivers—semi-press.

5. Always trying to stop the dribbler.

6. Setting up a two-man shuttle with the first two defensive players who reach the basket. These players continue this defensive assignment regardless of their assigned opponents until help arrives.

OTHER DEFENSIVE ADJUSTMENTS

A great number of other minor defensive techniques are also employed, such as assigning a particular player to the job of following up all his teammates' shots; or, on defense, instructing one or more players to float whenever the opponents are using a deliberate attack and the ball is on the other side of the court.

Coaches with a wealth of material may get excellent results with a two-platoon system. The five most expert ball-handlers may be specially trained in freeze tactics. When the situation arises, they may be rushed into the game. Having practiced the technique, they shouldn't have too much trouble applying it.

Many coaches prefer to have their team behind at the half when playing a first-class team. You may include me in this group. There are several reasons for this.

For one thing, it is always difficult to caution a team which has piled up a lead. The players feel they are superior to the opponents and will often pay little heed to the coach's efforts to prepare something special for the second half.

When a team is behind, on the other hand, they are anxious to find out how they may catch up; and the coach will find them very receptive to his counsel.

It is wise to keep in mind that games are won and lost in the second half, usually in the last quarter. Therefore, there is little harm and a great deal of good in substituting freely in the first half.

You may thus conserve the stamina of the regulars, give the reserves a chance, keep the morale of the squad high, and, above all, keep the friends and parents of all the players happy.

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